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VOLUME I

INTERNATIONAL CONFERENCE ON ENVIRONMENTAL ENFORCEMENT

September 22–25, 1992
Budapest, Hungary

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

COMMISSION
OF THE EUROPEAN
COMMUNITIES

Ministry of Housing,
Physical Planning,
and Environment (VROM)
The Netherlands

INTERNATIONAL CONFERENCE ON ENVIRONMENTAL ENFORCEMENT

CONFERENCE PROCEEDINGS
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These Proceedings, Volume I, include papers prepared by speakers, panelists and several participants for the second International Conference on Environmental Enforcement, September 22-25, 1992 in Budapest, Hungary. Volume II is scheduled for publication in early 1993 and will include opening remarks of the opening speakers, additional papers, summaries of discussions and the Conference evaluations.

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PREFACE

We extend to you a very warm welcome as a participant to the second International Conference on Environmental Enforcement in Budapest, Hungary. These Proceedings contain papers that will be presented by the speakers and panelists at the Conference. In addition to papers solicited of speakers and panelists on specific topics identified in the program, all participants and other interested parties were invited to contribute papers on related topics. This has resulted in several additional papers which are also enclosed in this Volume I of the Conference Proceedings. Papers that were not available at the time of printing will be included in a second Volume of these Proceedings which will be published early spring 1993 and will be sent to the participants' mailing addresses. The Proceedings will also be widely disseminated to country environmental officials and NGO's throughout the world.

The Conference is part of an ongoing effort to develop effective approaches in different settings to achieve widespread compliance with our very important environmental program requirements. Speakers have been selected with substantial experience in different aspects of compliance with and enforcement of environmental laws.

On behalf of the Executive Planning Committee, we look forward to a productive exchange.

Budapest, 22 September 1992

The Conference Staff

CONFERENCE PURPOSE AND GOALS

The International Conference on Environmental Enforcement held September 22-25, 1992 in Budapest, Hungary responds to the growing recognition of the importance of environmental concerns both domestically and on a global scale. The heightened interest in environmental enforcement -- broadly defined as the range of actions governments and others may take to encourage and compel compliance with environmental requirements -- stems from a desire to ensure that environmental requirements, expressed in policies, laws and permits, lead to real improvements in environmental quality. Efforts to achieve widespread compliance and enforcement of requirements also provide an element of fairness to the regulatory process, instill credibility to government institutions, and prevent short term economic competition among regions and between facilities from undermining longer term economic and environmental goals.

The Conference will focus on the development and enhancement of domestic environmental enforcement approaches[1] in Central and East European countries. The public and governmental leaders in these countries have strongly expressed the need for economic growth in harmony with concerns for public health and a quality environment. As the exchange should be broadly useful to other nations, representatives from other regions around the globe will also participate in the Conference. Planning of the Conference is guided by an Executive Planning Committee. The Committee includes the three sponsors as well as the Environmental Ministries of Poland, the Czech and Slovak Federal Republic, and Hungary, the Regional Environmental Center in Budapest, the United Nations Environment Programme IE/PAC, and Hungary's Public Prosecutor.

Sharing experiences and strategies among nations for developing sound domestic compliance and enforcement approaches has already proven valuable as attested by responses to the first International Enforcement Workshop held in Utrecht, the Netherlands, in May 1990. Despite differences in culture and legal systems, environmental enforcement theory and practice has basic elements which seem to transcend these differences among nations and peoples. It is not only possible but essential that nations seek to learn from each other what works and does not work to achieve widespread compliance with environmental requirements in different settings. Gaining compliance is an evolutionary process, and no nation has developed an approach which cannot benefit from continuing improvement. The Conference will explore different approaches,

[1] Consideration of issues related to enforcement of requirements and agreements that are global and transboundary in nature will be limited to a discussion of commitments of individual countries as they are adopted as domestic laws or requirements.

sharing experiences within a general framework, but will not promote any single model for achieving compliance with environmental requirements. Conference participants will consider the least resource-intensive approaches to achieving compliance success and explore integrated as well as single program focused compliance and enforcement activities.

The structure and content of the Conference is designed to provide a pragmatic exchange with open appraisals of advantages and disadvantages of different approaches, opportunities for practical follow-up and ongoing resource materials for those interested in enhancing environmental compliance and enforcement. The Conference seeks to build institutional relationships to establish responsibility, provide opportunities for leadership, and support networks of experts among governmental, public, and private entities necessary to effectively achieve environmental compliance. The Conference serves policy-makers from both within government and outside of government. Within government, the Conference has representation from national, regional and local governmental units, as appropriate to environmental enforcement and implementation responsibilities in each country, as well as current and potential leaders in both legal and technical aspects of environmental programs at the mid to senior management levels. It also involves selected non-governmental organizations (NGO's) and industry representatives.

CONFERENCE THEMES

The Conference will address the following themes over a four day period:

Theme #1: Context for Enforcement.

An introduction to the importance of compliance and enforcement concerns, a general framework for designing effective environmental compliance and enforcement approaches and alternative approaches within that framework including designing enforceable requirements, setting priorities, compliance promotion, compliance monitoring, enforcement response to violations, establishing clear roles and responsibilities, and evaluation of and accountability for success.

Also to be addressed are the implications of membership in the European Economic Community and community of nations for environmental compliance and enforcement and the current status of enforcement in Central and Eastern Europe.

Theme #2: Designing Enforceable Environmental Requirements.

An assessment of the importance of ensuring the enforceability of environmental laws and requirements as they are developed with examples of problems that have been encountered because of poorly designed requirements, and alternative approaches to enhance the likelihood that requirements will be enforceable when established.

Theme #3: Developing an Effective Compliance Monitoring Capability (e.g. Inspection Capability).

An exploration of different organizational approaches and strategies for monitoring compliance, focusing on inspection capabilities, including whether and how to develop an inspectorate and whether to inspect on a single or multi-program basis.

Theme #4: Developing Authorities and Legal Enforcement Capabilities to Respond to Violations.

An exploration of different authorities and approaches to legal enforcement within different legal settings and what is necessary to employ and develop those authorities effectively.

Theme #5: Economic Development and Ownership Issues.

An exploration of the economics and realities of enforcement in three settings:

1) different approaches towards enforcement at government owned and operated installations;
2) approaches to enforcement when faced with economic hardship, and
3) how to address the new opportunities for enhanced compliance presented by privatization of industry and changes in ownership.

Theme #6: Applications to a Particular Environmental Problem: Solid and Hazardous Waste.

An integrating session that combines all elements of the compliance and enforcement framework, exploring different approaches to compliance and enforcement in different countries and settings. This theme will explore more fully the potential of pollution prevention as a tool to enhance compliance and as an enforcement response. This discussion would cover the total problem of controlling waste including controlling domestically, the transport of hazardous waste from other nations.

Theme #7: Public Disclosure and Citizens' Role in Enforcement.

An exploration of the role of public disclosure, citizens and others in the enforcement process and their implications for achieving more widespread compliance.

PRINCIPLES OF ENVIRONMENTAL ENFORCEMENT

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SUMMARY

Environmental enforcement is taking its rightful place on the world stage, hand in hand with the growing awareness of the importance of environmental concerns and the commitments needed by governments and the public to address them. There is increasing recognition that enforcement is an essential element of environmental programs if they are to achieve their intended results. However, as a relative newcomer to many environmental programs around the globe, "environmental enforcement" has lacked a point of reference from which nations may productively share experiences and bridge differences in legal systems and cultures. The very language for "enforcement" often poses a challenge in finding adequate translation -- words that capture the kinds of behavior change we seek to achieve through environmental requirements and the range of approaches to both compel and encourage compliance.

The Principles of Environmental Enforcement Text which follows, provides definitions, a general framework, a set of principles, and a range of options to facilitate the development and implementation of environmental enforcement programs and compliance strategies in different international settings.

The Text, and the international training course it supports, do not offer a model but are instead a point of departure from which all nations can improve and build their own unique, and hopefully successful, enforcement approaches. It is a dynamic document which will change as its concepts are shared and refined through their use.

1 ORIGINS OF THE PRINCIPLES OF ENVIRONMENTAL ENFORCEMENT

Enforcement training was high on the list of areas of assistance that were identified by Poland's Ministry of Environmental Protection, Natural Resources and Forestry to the U.S. Environmental Protection Agency to help improve Poland's environmental programs. Development of the training posed a particular challenge since environmental programs in Poland were changing dramatically and unpredictably, and both enforcement and program implementation were highly decentralized and likely to remain so.

The resulting enforcement training has several attributes:

1.1 The enforcement training is philosophically neutral and generic -- not geared to any specific requirements -- since the environmental programs in Poland were undergoing radical changes. The course had to transcend the debates about the mix of "command and control", "market based" or "voluntary" approaches to pollution control. It had to transcend legal authorities and systems.

1.2 The course can be delivered by in-country trainers in order to reach a highly diverse and decentralized audience. Any training had to be replicable and readily adaptable for Poland to train its own people at the local levels of government. Because of the severity of the area's environmental problems, and because it possessed a very capable staff, the Katowice Ecology Department was recommended by the Ministry as the primary location **for a first offering of** the training.

1.3 The training offers a rich menu of options and ideas so that key policy makers can design their own program best suited to their own culture and legal systems. The course needed to be

based on something broader than the U.S. experience, particularly since Poland and other Central and East European nations were interested in closer ties with Western Europe as well as the U.S. We decided to seek active participation from the Netherlands as well as broader international contributions to make the course useful internationally.

1.4 The target audience of key policy makers is broadly defined since government officials, academics, non-government organizations, industry representatives and even journalists are all involved in some fashion in reshaping existing programs and policies.

1.5 The general framework for compliance and enforcement is adapted from the framework used to describe the U.S. enforcement program at the First International Enforcement Workshop in Utrecht. Given the positive reception at the first International Workshop in Utrecht, May 1990, we decided to apply that framework. In addition, key concepts such as deterrence theory seemed to have their roots less in particular cultures than in the nature of human behavior.

1.6 No one model is offered as the only approach to gaining compliance. Although the text was drafted based upon a modified U.S. framework offered in Utrecht, concepts and examples were broadened to accommodate a range of situations and experiences.

1.7 The course is a facilitated course, one in which the participants learn from their experiences within the course and from each other, with a "facilitator" helping guide these experiences and exercises. A facilitated course has the advantage of creating interaction among participants to enable them to start to build their own ideas, dialogue and consensus on the kind of enforcement programs and approaches that would work best in their regions.

1.8 To ensure the course is exciting and effective in its delivery, participants and facilitators help to shape its development and refinement. Key individuals from Poland were involved in the development of the course exercises. A group of potential facilitators was identified by our contacts in Katowice and Krakow based upon their interpersonal skills, experience and command of English (since they needed to work closely with the U.S. team). A team of six facilitators was selected following interviews with the U.S. team and were flown to the U.S. for a one-week effort to perfect some proposed exercises and sessions and to test whether a facilitated course could work given the usual experience of Poles and others with lecture-style education. Based upon the enthusiasm and suggestions of these facilitators, the course was developed and tested in Poland before a final offering. The future facilitators from Poland were trained in facilitation and given opportunities to practice delivery. The course was then effectively "handed off" to Poland for future delivery.

2 COMPLIANCE AND ENFORCEMENT DEFINED

One of the most difficult places to begin in offering the Principles of Environmental Enforcement training is finding the proper translation for the terms "compliance" and "enforcement" in another language.

Compliance is defined as a state in which environmental requirements are met and desired changes in behavior are achieved, e.g. proper pollution control equipment is in place and operating, production processes or raw materials are changed, work practices are changed, etc.

Enforcement is defined broadly as the range of approaches governments or others take to compel or encourage compliance within the regulated community. It also includes legal processes used to correct or halt situations that endanger the environment or public health. This definition accommodates the full range of "carrot and stick" approaches to gaining compliance. Thus it goes beyond the usual use of the term to generally include inspections (e.g. to find information needed to determine compliance status and to identify violations) and legal actions to impose some consequences for violating the law. However, programs designed to achieve

compliance may involve more than just traditional enforcement, for example they may also include assistance and subsidies.

The concept of deterrence is essential to any enforcement program. It is the creation of an atmosphere in which many choose to comply rather than violate the law. There are four interrelated elements needed to create deterrence: the likelihood that a violation will be detected; swift and certain response by government or others; consequences in the form of appropriate sanction or penalty; and the perception that these conditions exist. Other theories of human behavior appropriate to enforcement are provided by economic and behavior theory, but a basic principle of enforcement is that no one motivating factor can predict human behavior. A compliance strategy must therefore anticipate the full range of motivations that may be operative for a given situation. Another basic principle is that a well designed program, using these elements of deterrence, can leverage scarce program resources to affect a broad regulated community with well targeted activities.

3 THE GENERAL FRAMEWORK FOR COMPLIANCE AND ENFORCEMENT

The Principles Text offers a general framework for compliance and enforcement with seven elements:

- o Creating requirements that are enforceable.
- o Knowing who is subject to the requirements and setting program priorities.
- o Promoting compliance in the regulated community.
- o Monitoring compliance.
- o Responding to violations.
- o Clarifying roles and responsibilities.
- o Evaluating the success of the program and holding program personnel accountable for its success.

The Text provides a range of alternative approaches to meet the needs represented by the elements of the framework.

Within this framework, enforcement concerns begin and are addressed at the design stage of requirements, not only after requirements are put into effect. It also calls for a dynamic process, one which evaluates and adjusts to the successes and failures of proposed compliance strategies.

A further principle of environmental enforcement that enforcement has in common with other aspects of environmental protection is the need to establish priorities which will yield the greatest environmental and programmatic results. Various schemes for establishing priorities (i,e, for inspections, enforcement response and compliance incentives or assistance) are offered based upon risk reduction potential, the need to preserve the integrity of program reporting and related requirements, and the need to preserve the integrity of prior enforcement agreements or orders. Management and collection of information on the regulated community and its compliance status are critical to effective targeting.

Responses to violations can be quite varied depending upon the nature of violations, circumstances surrounding them and the range of response options available. Principles of environmental enforcement include the need to ensure fairness, and consistent and effective application of enforcement tools -- all of which serve to establish and reinforce the credibility of environmental laws and the governmental institutions which implement them. They also call for escalation from less resource intensive to more resource intensive or severe response, and the imposition of consequences commensurate with the harm and behavior of the violator. It includes negations to ensure correction is practical, realistic, that facts are correct and that creative opportunities for a successful response are fully explored from the perspective of both the government and violators.

Finally, environmental enforcement requires clear assignment of roles and responsibilities and mechanisms for coordination and cooperation among different disciplines and levels of government. It also requires accountability for results.

4 THE INTERNATIONAL COURSE AND ITS DELIVERY

The course has now been delivered in Poland and Hungary and is planned for delivery in Turkey, the Baltics, the Ukraine and Mexico. Participant response has been very favorable and enthusiastic. In all of these setting, the course is designed to be handed-off to in-country facilitators. The course materials consisting of the text, course exercises, and the facilitator's manual.

The training itself is designed as a three day course. The first day consists of a series of exercises which introduce the participants to basic concepts and a range of options. The second day provides an opportunity for the participants to design their own environmental requirements and compliance and enforcement strategy for a fictitious community and environmental problem. The third day is an enforcement negotiation settlement role-play where the participants act out different roles and consider an enforcement problem from different perspectives.

The course materials are available to any nation wishing to use them. The U.S. EPA's Office of Enforcement is prepared to consider requests i.e. to train facilitators to offer it within other countries. For the countries in Central and Eastern Europe in particular, efforts are being made to ensure ongoing delivery through the Environmental Management Training Centers being established by U.S.EPA and local government or non-governmental organizations. The enforcement training will be one of several modules offered in various aspects of environmental management. The course may also be adopted as part of the training at the U.S. EPA's National Enforcement Training Institute when it focuses on a possible international curriculum.

5 FUTURE PLANS FOR THE TEXT AND COURSE

Additional materials are being developed to provide a selection of case studies from which to choose when presenting the course. This will enable the facilitators to tailor the course to the types of environmental problems faced by each country.

The ideas generated at the Second International Conference on Environmental Enforcement and by course facilitators and course participants will help shape the future of the course, in terms of its content, its usefulness and distribution world-wide. We welcome continued input and ideas for the future of the Principles of Environmental Enforcement course and suggestions for additional steps we can take to spread the enforcement message.

PRINCIPLES OF ENVIRONMENTAL ENFORCEMENT

U.S. Environmental Protection Agency
July 15, 1992

UPDATING AND ENRICHING THIS TEXT

This text will be periodically updated to include new enforcement ideas and examples from countries around the world. Readers are encouraged to send comments and ideas for the next edition to:

Compliance Policy and Planning Branch
Office of Enforcement (LE-133)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
USA

ACKNOWLEDGMENTS

This text is one of three documents that form the basis of a training course on Principles of Environmental Enforcement. This course was prepared by the U.S. Environmental Protection Agency (U.S. EPA) in response to a request by Poland's Ministry of Environmental Protection, Natural Resources and Forestry. The text and course, however, are broadly designed for use by any level of government, in any culture.

The text was developed by the U.S. EPA in consultation with the Netherlands' Ministry of Housing, Physical Planning and Environment, the Polish Ministry of Environmental Protection, Natural Resources and Forestry, and the Katowice Ecology Department in Poland. The principal author of this text was Ms. Cheryl Wasserman, Chief of Compliance Policy and Planning Branch of the U.S. EPA's Office of Enforcement, with contributions from Mr. Jo Gerardu of the Netherlands Ministry of Housing, Physical Planning and Environment.

Much of this text draws upon articles prepared by the authors for international audiences. Particularly important sources include the Proceedings of the first International Enforcement Workshop, held in Utrecht, the Netherlands, in May 1990, and case studies on enforcement prepared for the Organization for Economic Cooperation and Development. The text also benefitted from the comments of reviewers in Canada, Hungary, and Poland.

The training course enables participants to develop their own management approach to an environmental problem, to draft enforceable requirements where appropriate, and to design a unique compliance strategy and enforcement program. It also provides an opportunity to participate in a negotiation session to resolve a specific enforcement case. The training exercises were designed by a team from the U.S. EPA, including personnel from the Office of Enforcement; Office of Policy, Planning and Evaluation; and the Philadelphia regional office. In addition to Ms. Wasserman, Ms. Ann DeLong and Ms. Margaret Berger of the Office of Enforcement served as Project Managers for the development and implementation of the course. Mr. Tom Maslany, Director of the U.S. EPA's Air, Toxics and Radiation Division in the Philadelphia regional office, and the Division staff were the principal authors of the enforcement case study used in the training. Ms. Pam Stirling of the Office of Policy, Planning and Evaluation, and Ms. Amy Evans of the Office of International Activities, also were essential to course development. Additional optional case studies for the course will be developed by other EPA regions and the Netherlands Ministry. A team of future trainers from Poland provided invaluable feedback during the course development.

Ms. Jan Connery of Eastern Research Group, Inc., a consultant retained by the U.S. EPA, edited and assisted in the development of the text and course materials and provided logistical and technical support for the course implementation.

TABLE OF CONTENTS[1]

[1]This edition of this document is based on the February 19, 1992 edition. The text has been reformatted to single spacing, therefore, the page numbers are different. Also, some text has been added to Case Study 1 in Chapter 11.

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GLOSSARY

administrative enforcement response - see *enforcement response.*

civil administrative order - a legal, independently enforceable order, issued directly by enforcement program officials, that imposes specific legal requirements and/or sanctions.

civil judicial enforcement response - see *enforcement response.*

command-and-control - an approach to environmental management in which the government prescribes detailed environmental requirements and then promotes and enforces compliance with these requirements.

compliance - the full implementation of requirements.

compliance monitoring - collecting and analyzing information on compliance status.

compliance promotion - any activity that encourages voluntary compliance with requirements. Examples of compliance promotion include educational programs, technical assistance, and subsidies.

compliance strategy - a strategy for achieving compliance with requirements.

deterrence - an atmosphere in which people are discouraged from violating requirements.

enforceable - able to be enforced.

enforceability - the degree to which a requirement can be enforced.

enforcement - the set of actions that governments or others take to achieve compliance within the regulated community and to correct or halt situations that endanger the environment or public health. Enforcement by the government usually includes inspections, negotiations, and legal action. It may also include compliance promotion.

enforcement program - a program dedicated to achieving compliance with environmental requirements and to correcting or halting situations that endanger the environment or public health. Government enforcement programs usually includes inspections, negotiations, and legal action. They may also include compliance promotion.

enforcement response - the set of actions taken in response to a violation to bring the violator into compliance and/or to deter both the violator and others from future violations.

> **informal response** - an enforcement response that cannot impose legal requirements or sanctions or be enforced, but can lead to more severe response if ignored. Informal responses are typically telephone calls or documents that provide information about a violation and action needed to correct the violation.
>
> **administrative enforcement response** - legal action in response to a violation that is handled by an administrative system within the enforcement program.

civil judicial enforcement response - formal lawsuits brought before the court to impose specific legal requirements or sanctions in response to a violation.

criminal judicial enforcement response - enforcement response that seeks criminal sanctions (e.g., imprisonment or a monetary fine) to punish the violator for the violations.

environment - all external conditions affecting the life, development, and survival of living organisms.

environmental auditing - a periodic, systematic, comprehensive, documented, and objective evaluation at a facility of its compliance status with environmental requirements and/or of its management systems and practices that affect compliance.

environmental requirements - specific practices and procedures required by law to directly or indirectly reduce or prevent pollution.

facility-specific requirements - requirements that apply to a specific facility.

general requirements - requirements that apply to a group of facilities.

facility - any operation or business.

facility-specific requirements - see *environmental requirements*.

field citation - a civil administrative order issued directly by an inspector in the field.

fine - see *monetary penalty*.

general requirements - see *environmental requirements*

inspection - official review and examination of the compliance status of a facility.

law - see *vehicle*.

license - see *vehicle*.

monetary penalty - a sanction that must be paid in a country's currency.

monitoring - see *compliance monitoring*.

order - a document backed by the force of law that requires a violator to take certain action within a certain time period to correct a violation or to cease illegal activity.

penalty - see *monetary penalty*.

permit - see *vehicle*.

policymakers - used in this text to mean anyone involved in developing or implementing an enforcement program, including government officials, nongovernment officials, industry and academic leaders, and private citizens.

pollution - the presence of matter or energy whose nature, location, or quantity produces undesired environmental effects.

pollution prevention - any efforts to reduce or prevent generation of pollutants. For example, pollution prevention includes changing a manufacturing process so that pollutants are no longer generated.

regulated community - those individuals, facilities, businesses, and/or institutions that are subject to particular requirements.

regulation - see *vehicle*

regulatory program - program that includes requirements.

requirements - see *environmental requirements* above.

sanction - any adverse consequence imposed on a violator.

self-monitoring - the process by which a source measures certain of its emissions, discharges, and/or performance parameters to provide information on the nature of the pollutant discharges and/or the operation of control technologies.

self-recordkeeping - the process by which sources maintain their own records of certain regulated activities they perform (e.g., shipment of hazardous waste).

self-reporting - the process by which sources provide enforcement officials with self-monitoring and/or self-recordkeeping data periodically and/or upon request.

source - a facility or individual that generates pollution.

technical assistance - assistance of a scientific or technological nature provided to facility personnel to help them comply with environmental requirements.

vehicle - this term is used in this text to mean a document that defines or supports the definition of environmental requirements. The primary vehicles for implementing environmental requirements are (see also Table 3-3 for expanded definitions):

> **law** - document that provides the vision, scope, and authority for requirements to protect public health from pollutants and/or to protect and restore the environment. Requirements are often defined in subsequent regulations, permits, and/or licenses. Some laws themselves contain requirements.
>
> **regulation** - document that establishes general requirements that must be met by the regulated community. Some regulations are directly enforced. Others provide criteria and procedures for developing permits and/or licenses.
>
> **permit** - document that contains requirements relating to the construction or operation of facilities that generate pollutants. These requirements may be general or facility-specific.

license - document that contains requirements pertaining to the manufacture, testing, sale, and/or distribution of a product, such as a pesticide, that may pose an environmental or public health risk if improperly used. Requirements may be general or facility-specific.

violation - noncompliance with a requirement.

PART I: CONTEXT FOR ENFORCEMENT

1. INTRODUCTION

Many countries are taking action to protect public health from environmental pollution and to restore and protect the quality of their natural environment. They have developed or are developing management strategies to prevent or control pollution. Most environmental management strategies involve legal requirements that must be met by individuals and facilities that cause or may cause pollution. These requirements are an essential foundation for environmental and public health protection, but they are only the first step. The second essential step is *compliance*—getting the groups that are regulated to fully implement the requirements. Without compliance, environmental requirements will not achieve the desired results. Compliance does not happen automatically once requirements are issued. Achieving compliance usually involves efforts to encourage and compel the behavior changes needed to achieve compliance.

WHAT IS THE PURPOSE OF THIS TEXT?

This text has been prepared to help individuals responsible for environmental protection in different countries, regions, and localities design and implement compliance strategies and *enforcement programs*—that is, programs dedicated to achieving compliance with environmental requirements. It is intended for anyone involved in program development or implementation, including government officials, nongovernment officials, industry and academic leaders, and private citizens. For convenience, this text refers to these individuals as *policymakers*. The text provides:

- A framework for structuring enforcement programs and compliance strategies.
- Some basic principles common to successful programs.
- A variety of options for various elements of a program.
- Issues to be considered in designing a program.
- Examples of some existing enforcement programs.
- A list of resources that provide further information.

Successful implementation of environmental requirements requires significant effort and forethought. Changes in behavior have always been difficult to accomplish on both a societal and personal level. There is no magic formula for achieving compliance. There is merely trial, evaluation, and response to what works and does not work in a particular setting. Nevertheless, a reliable framework for designing enforcement programs has emerged based on the experience of countries such as the United States, the Netherlands, Canada, Norway, Sweden, and others. This text derives from that experience and will be updated periodically based on additional international experience to enrich the possibilities offered.

WHAT IS COMPLIANCE?

Compliance is the full implementation of environmental requirements. Compliance occurs when requirements are met and desired changes are achieved, e.g., processes or raw materials are changed, work practices are changed so that, for example, hazardous waste is disposed of at approved sites, tests are performed on new products or chemicals before they are marketed, etc. The design of requirements affects the success of an environmental management program. If requirements are well-designed, then compliance will achieve the desired environmental results. If the requirements are poorly designed, then achieving compliance and/or the desired results will likely be difficult.

WHAT IS ENFORCEMENT?

Enforcement is the set of actions that governments or others take to achieve compliance within the regulated community and to correct or halt situations that endanger the environment or public health. Enforcement by the government usually includes:

- Inspections to determine the compliance status of the regulated community and to detect violations.
- Negotiations with individuals or facility managers who are out of compliance to develop mutually agreeable schedules and approaches for achieving compliance.
- Legal action, where necessary, to compel compliance and to impose some consequence for violating the law or posing a threat to public health or environmental quality.

Enforcement may also include:

- Compliance promotion (e.g., educational programs, technical assistance, subsidies) to encourage voluntary compliance.

Nongovernment groups may also become involved in enforcement by detecting noncompliance, negotiating with violators, commenting on government enforcement actions, and where the law allows, taking legal action against a violator for noncompliance or against the government for not enforcing the requirements. In addition, certain industries such as the banking and insurance industries may be indirectly involved in enforcement by requiring assurance of compliance with environmental requirements before they will issue a loan or insurance policy to a facility.

In some countries, societal norms of compliance have been a powerful force compelling compliance with any form of legal requirement. A system that relies on social norms for enforcement may not be effective in every situation and may become vulnerable to abuse if societal norms break down over time. This possibility has stimulated new consideration internationally of the need for dedicated enforcement programs within government and nongovernment organizations.

WHY ARE COMPLIANCE AND ENFORCEMENT IMPORTANT?

An effective compliance strategy and enforcement program brings many benefits to society (Table 1-1). First, and most important, is the improved environmental quality and public health that results when environmental requirements are complied with. Second, compliance with environmental requirements reinforces the credibility of environmental protection efforts and the legal systems that support them. Third, an effective enforcement program helps ensure fairness for those who willingly comply with environmental requirements. Finally, compliance can bring economic benefits to individual facilities and to society.

WHAT ARE THE COMPONENTS OF A SUCCESSFUL ENFORCEMENT PROGRAM?

An effective enforcement program involves several components:

- Creating requirements that are enforceable.
- Knowing who is subject to the requirements and setting program priorities.
- Promoting compliance in the regulated community.
- Monitoring compliance.
- Responding to violations.
- Clarifying roles and responsibilities.
- Evaluating the success of the program and holding program personnel accountable for its success.

TABLE 1-1. WHY ARE ENVIRONMENTAL ENFORCEMENT PROGRAMS IMPORTANT?

- **To Protect Environmental Quality and Public Health.** Compliance is essential to achieving the goals of protecting public health and environmental quality envisioned by environmental laws. Public health and the environment will be protected only if environmental requirements get results. Enforcement programs are essential to get these results.

- **To Build and Strengthen the Credibility of Environmental Requirements.** To get results, environmental requirements and the government agencies that implement them must be taken seriously. Enforcement is essential to build credibility for environmental requirements and institutions. Once credibility is established, continued enforcement is essential to maintain credibility. Credibility means that society perceives its environmental requirements and the institutions that implement them as strong and effective. Credibility encourages compliance by facilities that would be unlikely to comply if environmental requirements and institutions are perceived as weak. The more credible the law, the greater the likelihood of compliance, and the likelihood that other government efforts to protect the environment will be taken seriously.

- **To Ensure Fairness.** Without enforcement, facilities that violate environmental requirements will benefit compared to facilities that voluntarily choose to comply. A consistent and effective enforcement program helps ensure that companies affected by environmental requirements are treated fairly. Facilities will be more likely to comply if they perceive that they will not be economically disadvantaged by doing so.

- **To Reduce Costs and Liability.** Though compliance is often costly in the short-term, it can have significant long-term economic benefits to both society and the complying facility. The healthier environment created by compliance reduces public health and medical costs, as well as the long-term cost to society of cleaning up the environment. Compliance benefits industry by reducing its liability and long-term cleanup costs. Industry may also realize immediate economic benefits if compliance involves recycling valuable materials or increasing the efficiency of its processes. A strong enforcement program may also encourage facilities to comply by preventing pollution and minimizing waste, rather than installing expensive pollution control and monitoring equipment.

These components form a framework within which to consider issues pertinent to any enforcement program, no matter what its stage of development. The response to these issues may differ among countries, among regions or localities within countries, and among different programs over time. Important to the success of all programs, however, is the need to address all elements of the framework. Each element is part of an interconnected whole and thus can influence the success of the whole program.

HOW PROGRAMS MAY EVOLVE IN DIFFERENT CULTURES AND COUNTRIES

Anyone involved in designing an enforcement program will face certain issues: How should a program begin? What elements are most important? How can the full range of responsibilities be handled with limited program resources? How should the program evolve over time as the program moves to new stages, as policymakers evaluate the success of previous strategies, and as technological and economic developments suggest new solutions? There are no standard answers. Each program must answer these questions for itself based on program resources and culture. This text provides a broad range of possibilities for the different elements of an enforcement program. Policymakers can select from these possibilities to design or modify a program so that it best serves the desired goals within the available resources.

Resources often limit choices. For example, ideally inspectors would be well-trained before they start to inspect. Due to limited resources and/or program priorities, many programs rely initially, if not predominantly, on on-the-job training. The challenge for every program is to make the most effective use of the resources that are available. This text presents many ideas for leveraging program resources to achieve broad results.

Finally, the effectiveness of an enforcement program will depend in part on the degree to which environmental quality is a national, regional, and local priority. Achieving compliance sometimes requires hard economic choices. Public and government concern for environmental quality provide an important foundation for enforcement programs.

2. THE BASIS FOR COMPLIANCE AND ENFORCEMENT

INTRODUCTION

One of the primary goals of an environmental enforcement program is to change human behavior so that environmental requirements are complied with[1]. Achieving this goal involves motivating the regulated community to comply, removing barriers that prevent compliance, and overcoming existing factors that encourage noncompliance.

Many factors, listed in Table 2-1 and described below, affect compliance. Which factors are operating in any particular regulatory situation will vary substantially depending on the economic circumstances of the regulated community, on cultural norms within the community and nation as a whole, and sometimes on the individual personalities and values of managers within the regulated community.

In any environmental situation several of the factors described below will influence the behavior of the regulated community. For this reason, environmental enforcement programs generally will be most effective if they include a range of approaches to changing human behavior. The approaches described in this text fall into two categories: (1) promoting compliance through education and incentives, and (2) identifying and taking action to bring violators into compliance. In some cultures, these two approaches are referred to as "carrot" and "stick." Different programs will place different emphasis on these two approaches depending on the culture and the particular regulatory situation. However, experience with enforcement programs does suggest that some form of enforcement response may ultimately be essential to achieve widespread compliance.

FACTORS AFFECTING COMPLIANCE

Deterrence

In any regulatory situation some people will comply voluntarily, some will not comply, and some will comply only if they see that others receive a sanction[2] for noncompliance. This phenomenon - that people will change their behavior to avoid a sanction - is called *deterrence*. Enforcement deters detected violators from violating again, and it deters other potential violators by sending a message that they too may experience adverse consequences for noncompliance. This multiplier or leverage effect makes enforcement a powerful tool for achieving widespread compliance. Studies of and experience with enforcement show that four factors are critical to deterrence:

- There is a good chance violations will be detected.
- The response to violations will be swift and predictable.
- The response will include an appropriate sanction.
- Those subject to requirements perceive that the first three factors are present.

These factors are interrelated. For example, to create an appropriate level of deterrence, a more severe sanction may be needed for violations that are unlikely to be detected. Conversely, a less severe sanction may be sufficient if violations are likely to be detected and response can therefore be relatively swift.

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[1]Another major goal of an enforcement program is to correct any immediate and serious threat to public health or the environment posed by pollution (e.g., a chemical spill that is contaminating a drinking water supply, discovery of toxic or explosive chemical wastes in an area accessible to the public).

[2]*Sanction* is used in this text to mean any adverse consequence imposed on a violator.

TABLE 2-1. FACTORS AFFECTING COMPLIANCE

FACTORS MOTIVATING COMPLIANCE	BARRIERS TO COMPLIANCE AND FACTORS ENCOURAGING NONCOMPLIANCE
ECONOMIC	
▪ Desire to avoid a penalty. ▪ Desire to avoid future liability. ▪ Desire to save money by using more cost-efficient and environmentally sound practices.	▪ Lack of funds. ▪ Greed/desire to achieve competitive advantage. ▪ Competing demands for resources.
SOCIAL/MORAL	
▪ Moral and social values for environmental quality. ▪ Societal respect for the law. ▪ Clear government will to enforce environmental laws.	▪ Lack of social respect for the law. ▪ Lack of public support for environmental concerns. ▪ Lack of government willingness to enforce.
PERSONAL	
▪ Positive personal relationships between program personnel and facility managers. ▪ Desire, on the part of the facility manager, to avoid legal process. ▪ Desire to avoid jail, the stigma of enforcement, and adverse publicity.	▪ Fear of change. ▪ Inertia. ▪ Ignorance about requirements. ▪ Ignorance about how to meet requirements.
MANAGEMENT	
▪ Jobs and training dedicated to compliance. ▪ Bonuses or salary increases based on environmental compliance.	▪ Lack of internal accountability for compliance. ▪ Lack of management systems for compliance. ▪ Lack of compliance training for personnel.
TECHNOLOGICAL	
▪ Availability of affordable technologies.	▪ Inability to meet requirements due to lack of appropriate technology. ▪ Technologies that are unreliable or difficult to operate.

Because perception is so important in creating deterrence, *how* enforcement actions are taken is just as important as the fact that they are taken. History has many stories of small armies that successfully beat larger forces by giving the impression that they were a formidable fighting force. Similarly, enforcement actions can have significant effects far beyond bringing a single violator into compliance if they are well placed and well publicized.

Economics

Change may also be motivated by economic considerations. The regulated community may be more likely to comply in cases where enforcement officials can demonstrate that compliance will save money (e.g., achieving compliance by recycling valuable materials instead of discharging them to the environment may yield a net profit), or when the government provides some form of subsidy for compliance. Conversely, the higher the cost of compliance, the greater may be the resistance to compliance in the regulated community. Some facility managers that may want to comply might not do so if they feel that the cost of compliance would be an economic burden to their operations. For example, the Netherlands had experienced a relatively high degree of compliance for processing used oil from inland waterway vessels when the processing was offered free; however, compliance decreased as soon as the government levied a charge for this service.

To remove economic incentives to violate the law, the monetary penalty for a violation would, ideally, at least equal the amount a facility would save by not complying. This deters deliberate economic decisions not to comply, and it helps treat compliers and noncompliers equally.

Institutional Credibility

Each country has its own social norms concerning compliance. These norms derive largely from the credibility of the laws and the institutions responsible for implementing those laws. For example, the social norm may be noncompliance in countries where laws have historically not been enforced, either because the law is unenforceable or because the institutions responsible for enforcement have lacked the political power or resources to enforce. There may also be a resistance to enforcement in countries where recent regimes have imposed laws against the will of the citizens. It may take longer for enforcement programs to build credibility in these countries.

Strategies to build credibility will vary. In some cultures, aggressive enforcement will provide credibility. In others, it may be important to have an initial period of promotion and encouragement to create a spirit of cooperation, followed by a well-publicized shift to more aggressive enforcement to signal that there will be consequences for noncompliance. In other cultures, a mixed approach at the outset may be most successful.

The government's will to enforce environmental laws - that is, to affirmatively promote voluntary compliance and identify and impose legal consequences on those who do not comply voluntarily - indicates and influences social values. Not enforcing a law tends to express a value that compliance is not important. A goal on the part of the government to bring a majority of the regulated community into compliance sends a message that compliance is important and helps build a social norm of compliance.

Social Factors

Personal and social relationships also influence behavior. Moral and social values may inspire or inhibit compliance. For example, in some situations, facilities may voluntarily comply with requirements out of a genuine desire to improve environmental quality. They may also comply out of a desire to be a "good citizen" and maintain the good will of their local communities or their clients. Facility managers may also fear a loss of prestige that can result if information about noncompliance is made public. Conversely, compliance will likely be low in

countries where there has been little or no social disapproval associated with breaking laws and/or damaging the environment.

Successful personal relationships between enforcement program personnel and managers of regulated facilities may also provide an incentive to comply. On the other hand, a desire to avoid confrontation may prevent program personnel from pursuing the full range of enforcement actions they may need to take to ensure compliance. Also, an enforcement official's objectivity may be compromised if he or she becomes too familiar with the facility's personnel and operations. Oversight visits by an independent enforcement official can help monitor for and prevent this potential problem. The relationship factor can be incorporated into a compliance strategy through such means as providing technical support to regulated groups and enhancing the interpersonal skills of compliance personnel. Social respect for environmental requirements can be improved by finding industry leaders who agree to set a well-publicized example of compliance, and by firm and visible enforcement of environmental requirements (particularly if the initial focus is to correct noncompliance that is posing significant and clear risks to the environment and/or public health).

Psychological Factors

Several psychological factors, common to human nature, may affect compliance rates. One of these is fear of change - the belief that familiar ways of operating are safe and new ways are risky. Closely related to this is inertia. Many people tend to naturally resist change because of the perceived effort it will require to enact the change. Both promotional efforts to publicize the benefits of compliance and the perception and reality of consequence for noncompliance play an important role in overcoming inertia.

Knowledge and Technical Feasibility

Besides being motivated to comply, regulated groups must have the *ability* to comply. This means they must know they are subject to requirements, they must understand what steps to take to create compliance, they must have access to the necessary technology to prevent, monitor, control, or clean up pollution, and they must know how to operate it correctly. A lack of knowledge or technology can be a significant barrier to compliance. This barrier can be removed by providing education, outreach, and technical assistance.

IMPACT ON PROGRAM DESIGN

As mentioned earlier, which of the factors described above will influence behavior in a particular environmental situation will depend on the culture and situation. An environmental enforcement program will be most effective if its design is based on an understanding of the factors that are operating. Such understanding will enable policymakers to determine the optimal strategy to motivate and enable compliance, and to discourage noncompliance. For example, in cultures where there is a tendency to ignore both requirements and requests for voluntary behavior changes, creating deterrence may be the most important component of program design. Conversely, in countries where there is a social norm of compliance, activities to promote voluntary compliance may be very effective. In situations where financial constraints are the main barrier to compliance, some form of economic support or advantage to the regulated community would likely have great impact.

Whatever factors are influencing behavior, they will almost certainly change over time. Thus, flexibility to review and revise the program design is key to long-term effectiveness.

3. CREATING ENVIRONMENTAL LAWS AND REQUIREMENTS THAT ARE ENFORCEABLE

INTRODUCTION

There are many approaches to managing environmental problems (see Table 3-1). The need for and scope of enforcement depends, in part, on which management approach or approaches are being used (see Figure 3-1). Some approaches are purely voluntary - that is, they encourage and assist change but do not require it. Other approaches are *regulatory* - that is, they require change. At the heart of regulatory approaches are *environmental requirements* - specific practices and procedures required by law to directly or indirectly reduce or prevent pollution. Table 3-2 lists some examples of the types of requirements typically used with command-and-control approaches to environmental management. While wholly regulatory (command-and-control) approaches generally have the most extensive requirements of all the management options, most of the other options introduce some form of requirements. Ensuring compliance with these requirements will require enforcement.

The first step in fostering compliance is to ensure that the environmental requirements themselves are *enforceable*, i.e., that laws provide the necessary authorities for enforcement, and that requirements are clear and practical. This chapter describes several approaches that can be used to make environmental requirements enforceable.

The "enforceability" of environmental requirements has a great impact on the effectiveness and cost of enforcement and on the ultimate level of compliance. For example, enforcement programs that do not have adequate legal authority will generally be ineffective. Requirements that rely on expensive, unreliable, or unavailable technologies will be difficult or impossible to comply with. Requirements that are unclear, imprecise, ambiguous, inconsistent, or contradictory may be difficult or impossible to enforce.

By considering enforceability early in and throughout the process of developing environmental requirements, policymakers can help make requirements as effective as possible. Raising problems after critical decisions have been made may be disruptive and may waste resources and cause significant delays. Involvement of both legal and technical staff is important to create enforceable requirements.

ENFORCEABILITY OF DIFFERENT APPROACHES TO ENVIRONMENTAL MANAGEMENT

Most of the approaches to environmental management described in Table 3-1 are based on some form of requirements that will likely require enforcement.[1] For example, some market-based approaches depend on enforcement to define the property being traded and to provide an incentive to use the market. A tradeable permit system needs some enforcement of the underlying requirements, otherwise there may be little incentive to comply with the requirements or to trade rights. With this system, inspectors will have to review records of permit transactions and adjustments to judge compliance. The system of labelling to enhance consumer choice may require enforcement to avoid inaccurate or misleading labels.

[1]Liability systems do not have explicit requirements. However, implicit requirements often develop as cases are brought to court and patterns are established about what activities justify which consequences. To be effective, liability systems generally need some enforcement by the government, nongovernment organizations, or individuals to gather evidence and develop legal cases.

TABLE 3-1. APPROACHES TO ENVIRONMENTAL MANAGEMENT

VOLUNTARY APPROACHES

Voluntary approaches encourage or assist, but do not require, change. Voluntary approaches include public education, technical assistance, and the promotion of environmental leadership by industry and nongovernment organizations. Voluntary approaches may also include some management of natural resources (e.g., lakes, natural areas, ground water) to maintain environmental quality.

COMMAND-AND-CONTROL

In command-and-control approaches, the government prescribes the desired changes through detailed requirements and then promotes and enforces compliance with these requirements. Table 3-2 describes types of requirements typically used in command-and-control approaches.

MARKET-BASED/ECONOMIC INCENTIVE APPROACHES

Market-based/economic incentive approaches use market forces to achieve desired behavior changes. These approaches can be independent of or build upon and supplement command-and-control approaches. For example, introducing market forces into a command-and-control approach can encourage greater pollution prevention and more economic solutions to problems. Market-based/economic incentive approaches include:

- Fee systems which tax emissions, effluents, and other environmental releases.
- Tradeable permits which allow companies to trade permitted emission rights with other companies.
- Offset approaches. These approaches allow a facility to propose various approaches to meeting an environmental goal. For example, a facility may be allowed to emit greater quantities of a substance from one of its operations if the facility offsets this increase by reducing emissions at another of its operations.
- Auctions. In this approach, the government auctions limited rights to produce or release certain environmental pollutants.
- Environmental labelling/public disclosure. In this approach, manufacturers are required to label products so that consumers can be aware of the environmental impacts of the products. Consumers can then choose which products to purchase based on the products' environmental performance.

RISK-BASED APPROACHES

Risk-based approaches to environmental management are relatively new. These approaches establish priorities for change based on the potential for reducing the risks posed to public health and/or the environment.

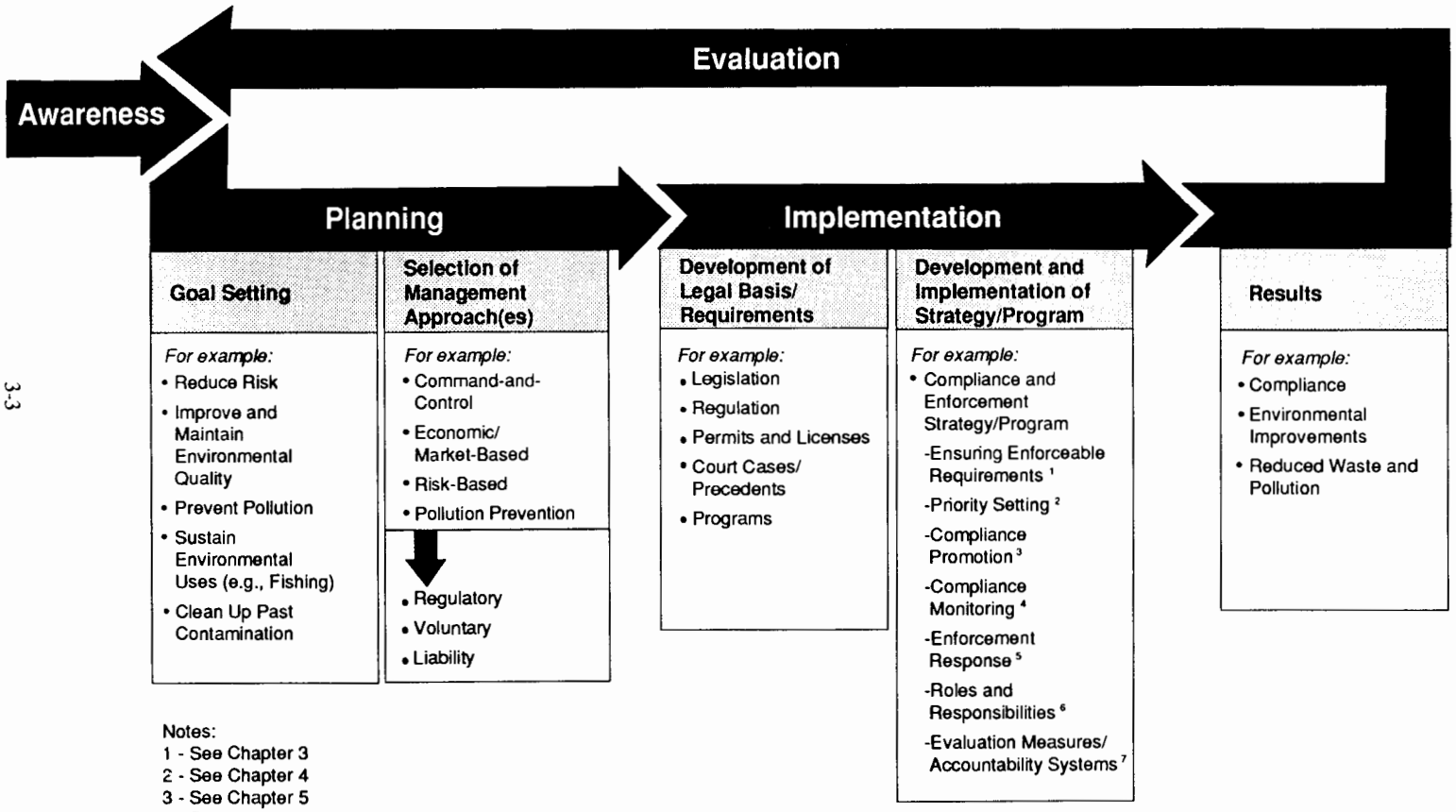
POLLUTION PREVENTION

The goal of pollution prevention approaches is to prevent pollution by reducing or eliminating generation of pollution at the source. The changes needed to prevent pollution can be required, e.g., as part of a command-and-control approach, or encouraged as voluntary actions.

LIABILITY

Some environmental management approaches are based on laws that make individuals or businesses liable for the results of certain actions or for damages they cause to another individual or business or to their property. Examples of liability-based environmental management systems include nuisance laws, laws requiring compensation for victims of environmental damage, and laws requiring correction of environmental problems caused by improper disposal of hazardous waste. Liability systems reduce or prevent pollution only to the extent that individuals or facilities fear the consequences of potential legal action against them.

Figure 3-1. The Environmental Management Cycle



Notes:
1 - See Chapter 3
2 - See Chapter 4
3 - See Chapter 5
4 - See Chapter 6
5 - See Chapter 7
6 - See Chapter 8
7 - See Chapter 9

TABLE 3-2. EXAMPLES OF ENVIRONMENTAL REQUIREMENTS

Ambient Standards

Ambient standards (also called media quality standards) are goals for the quality of the ambient environment (e.g., air, water). Ambient standards are usually written in units of concentration (e.g., the level of nitrogen dioxide in the air cannot exceed 0.053 parts per million). In the U.S., ambient standards are used as environmental quality goals and to plan the level of emissions from individual sources that can be accommodated while still meeting the areawide goal. Ambient standards may also be as triggers, e.g., when the standard is exceeded, monitoring or enforcement efforts are increased. Enforcement of ambient standards usually requires relating an ambient measurement to emissions or activities at a specific facility. This can be difficult.

Performance Standards (Emissions and Effluents)

These standards are widely used for regulations, permits, and monitoring requirements. Performance standards limit the amount or rate of particular chemicals or discharges that a facility can release into the environment in a given period of time. Performance standards provide flexibility because they allow sources to choose which technologies they will use to meet the standards. Often such standards are based on the output that can be achieved using the best available control technology. Some requirements introduce additional flexibility by allowing a source with multiple emissions to vary its emissions from each stack as long as the total sum of the emissions does not exceed the permitted total. Compliance with emission standards is measured by sampling and monitoring. Depending on the kind of instruments required, compliance can be difficult and/or expensive to monitor.

Technology Standards

These standards require the regulated community to use a particular type of technology (e.g., the "best available technology") to control and/or monitor emissions. Technology standards are particularly appropriate when the equipment is known to perform well under the range of conditions generally experienced by sources in the community. It is relatively easy for inspectors to determine whether sources are in compliance with technology standards: the approved equipment must be in place and operating properly. It may be difficult, however, to ensure that the equipment is operating properly over a long period of time. Technology standards can inhibit technological innovation and pollution prevention.

Practice Standards

These standards require or prohibit certain work activities that have significant environmental impacts. For example, a standard might prohibit carrying hazardous liquids in uncovered buckets. Like technology standards, it is easy for program officials to inspect for compliance and take action against noncomplying sources, but difficult to ensure ongoing compliance.

Information Requirements

These requirements are different from the standards described above in that they require a source of potential pollution (e.g., a pesticide manufacturer or facilities involved in generating, transporting, storing, treating, and disposing of hazardous waste) to develop and submit information to the government. Sources generating pollution may be required to monitor, report on, and maintain records of the level of pollution generated and whether or not it exceeds performance standards. Information requirements are often used when the potential pollution source is a product such as a new chemical or pesticide, rather than a waste. For example, a manufacturer may be required to test and report on a product's potential to cause harm if released into the environment.

Product or Use Bans

A ban may prohibit a product outright (e.g., ban the manufacture, sale, and/or use of a product) or may prohibit particular uses of a product.

All regulatory approaches to environmental management will benefit if the underlying requirements are enforceable — that is, clear and practical. This chapter provides suggestions for making environmental requirements enforceable.

LAWS: THE FRAMEWORK FOR ENFORCEMENT

Authorities

Environmental laws will be most effective if they provide the authorities necessary for their own enforcement. Without sufficient authority, an enforcement program can be severely handicapped in its ability to create compliance. The credibility of an enforcement program will be eroded if violators can successfully challenge the authority of a program to take certain enforcement actions. Authorities that can be extremely important to an effective program include (see also Table 7-1 in Chapter 7):

- Authority to issue regulations, permits, licenses, and/or guidance to implement the law (see Table 3-3).
- Authority to waive or tailor requirements to facility-specific circumstances.
- Authority to inspect regulated facilities and gain access to their records and equipment to determine if they are in compliance.
- Authority to require that the regulated community monitor its own compliance, keep records of its compliance activities and status, report this information periodically to the enforcement program, and make the information available for inspection.
- Authority to take legal action against noncomplying facilities, for example:
  - Authority to impose a range of monetary penalties and other sanctions on facilities that violate the law.
  - Authority to impose criminal sanctions on facilities or individuals who violate the law (e.g., facilities that deliberately falsify data).
- Authority to correct situations that pose an imminent and substantial threat to public health and/or the environment.

Institutional Framework

Laws generally establish the institutional framework for their own enforcement by describing who will be responsible for implementing them. Without such a framework, it may be difficult to establish who is responsible for ensuring compliance has been achieved. For example laws can specify the roles and responsibilities of the various levels of government and the various government agencies or ministries (see Chapter 8). Lawmakers may also want to give citizens and nongovernment organizations representing citizens the right to bring a lawsuit for the purpose of enforcing the law. For example, environmental laws can allow citizens to sue polluters for failing to comply with the law, and/or the government agency for failing to fulfil its duties under the law. Such provisions have been an important means of enlisting citizen participation in the United States (see Chapter 8 for more information on citizen participation).

Related Laws Compelling Professional and Equitable Conduct

The credibility of government institutions is very important to establish a sound basis for voluntary compliance. Therefore, related requirements to prevent bribery, to prevent falsification of environmental data, and to ensure fair application of the law can be very important. Many countries make government officials criminally liable if they accept a bribe. Other countries protect the rights of facilities by ensuring that government inspections are based on some rational

TABLE 3-3. EXAMPLES OF VEHICLES FOR IMPLEMENTING ENVIRONMENTAL REQUIREMENTS

- ***Laws*** provide the vision, scope, and authority for environmental protection and restoration. In some countries, laws also encompass the types of general requirements described by other countries in regulations (see below).

- ***Regulations*** establish (in greater detail than can be specified by law) general requirements that must be met by the regulated community, e.g., how harmful substances should be tested, registered, handled, monitored, emitted, discharged, and/or disposed of. These requirements generally apply at a national, state, or regional level (depending on the scope specified in the law). Some regulations are directly enforced. Others provide the criteria and procedures for developing facility-specific requirements via permits and licenses that provide the basis for enforcement. Some countries do not include the step of developing regulations but rely solely on facility-specific permits or licenses to implement their laws.

- ***Permits*** usually control activities related to construction or operation of facilities that generate pollutants. The requirements in permits are often based on specific criteria established in laws, regulations, and/or guidance.

  - ***General permits*** specify exactly what a class of facilities (e.g., gasoline stations) is required to do. General permits and licenses are used when it is impractical and/or unnecessary to issue a specific permit for each facility (e.g., when there are numerous small facilities that have very similar operations).

  - ***Facility-specific*** permits specify exactly what a particular facility is required to do. Permits often take into account the particular conditions at the specific facility.

- ***Licenses*** are similar to permits. Licenses are permits to manufacture, test, sell, and/or distribute a product, such as a pesticide, that may pose an environmental or public health risk if improperly used. Licenses may be general or facility-specific.

- ***Guidance and Policies.*** Often government regulators must interpret requirements, even those that have been carefully drafted, because not all applications can be anticipated. Written guidance and policies for interpreting and implementing requirements help ensure consistency and fairness as the requirements are applied in practice. Guidance and policies are also useful in situations where regulation is achieved solely by facility-specific permits or licenses (either because the regulatory system does not include more general requirements or because it is impractical to issue general requirements, e.g., due to wide variability in the regulated community). In this case, guidance and policies for creating requirements will help ensure consistency and fairness.

scheme or on a complaint or other piece of information that specifically suggests a violation has occurred.

Compatibility with Existing Laws

To be effective and respected, laws must be rational and not send conflicting signals. A new environmental law should be consistent with any existing environmental laws (unless it is intended to supersede these laws) and should reinforce and complement laws and policies in other sectors, such as:

- Health: food safety, occupational health and safety, consumer products, pesticide use, etc.
- Natural resource management: water, energy, minerals, forests, etc.
- Land use planning: transportation, development, siting, etc.
- Industry and commerce.
- Agriculture.

Structure and Criteria for Establishing Environmental Requirements

Some environmental laws contain requirements. Others specify a structure and criteria for establishing requirements; requirements are then developed separately. Requirements may be "general" (i.e., they apply to a group of facilities) or facility-specific.

- *General requirements* are most frequently implemented in the form of (1) laws, (2)regulations, or (3) general permits or licenses that apply to a specific class of facilities (e.g., dry cleaners) (see Table 3-3)[2]. General requirements may apply directly to a group of facilities or they may serve as a basis for developing facility-specific requirements.
- *Facility-specific requirements* are usually implemented in the form of permits or licenses.

It can be simpler, in some respects, to enforce general requirements because inspectors do not have to determine what the applicable requirements are for each facility. However, in terms of gaining widespread compliance, a disadvantage of general requirements is that the burden of compliance often falls more heavily on some members of the regulated community than on others. Also, general requirements may need interpretation as to how they apply to particular facilities. Inequitable or unclear general requirements can lead to compliance problems. Facility-specific requirements may comprise a goal that sources are either more willing or better able to meet.

Different countries use different approaches to developing requirements. Figure 3-2 shows some possible approaches. Table 3-4 shows an example of the relationship between a law, regulation, and permit in the United States. This example illustrates how in the United States requirements become more detailed and specific as they are transformed from a law to a regulation to a permit.

REQUIREMENTS: MAKING THEM ENFORCEABLE

Many approaches, described below, are currently being used in different countries to help ensure that requirements will be enforceable.

[2]The terms law, regulation, permit, and license have different meanings in different countries. For example, some countries use the term "license" instead of "permits." For clarity and consistency, this text will adhere to the definitions provided in Table 3-3.

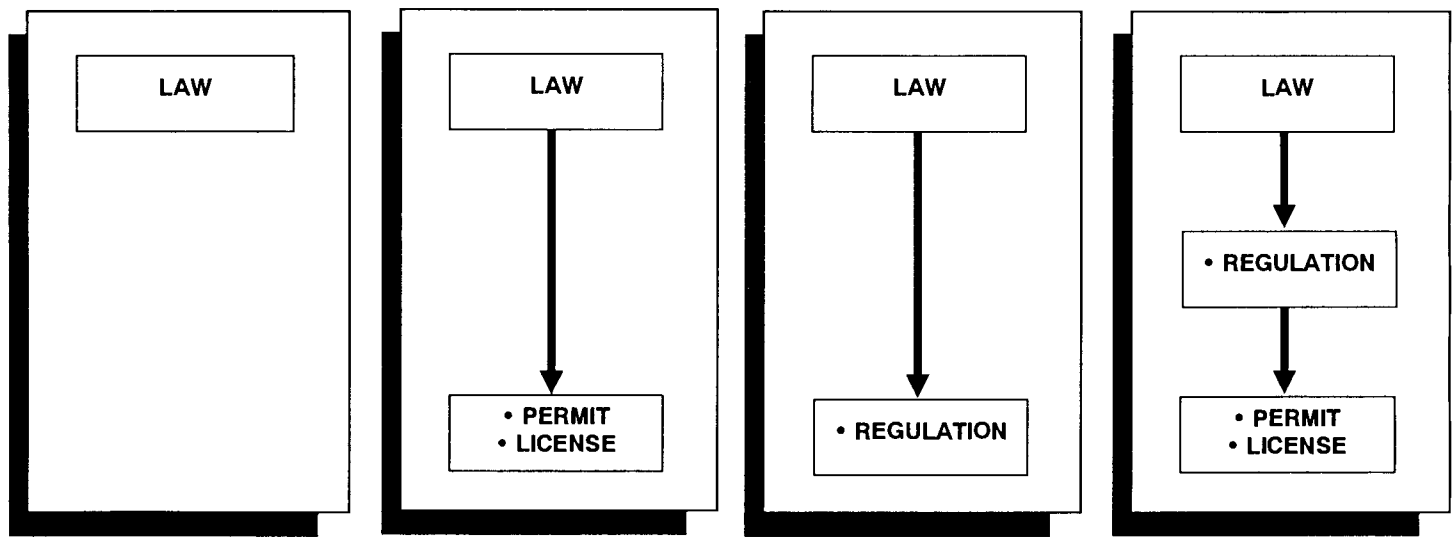


Figure 3-2. Examples of Different Relationships between Laws, Regulations, Permits, and Licenses. (In all these cases, there is likely to be guidance and policies to help interpret the application of the requirements.)

TABLE 3-4. EXAMPLE OF THE RELATIONSHIP BETWEEN AN ENVIRONMENTAL LAW, REGULATION, AND PERMIT IN THE UNITED STATES

In the United States, federal environmental laws outline requirements that are then further defined in federal regulations. Finally, federal regulations are implemented by the states through permits that specifically interpret and explain the requirements established in the laws and regulations. This example shows requirements developed under the U.S. Federal Water Pollution Control Act.

LAW:	One part of this law states that "the Administrator [of the Environmental Protection Agency] shall require the owner or operator of any point source to . . . sample . . . effluents (in accordance with such methods . . . as the Administrator shall prescribe)."
REGULATION:	A corresponding part of the regulations states: permits issued by the states must specify "required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring . . ."
PERMIT:	A corresponding part of a permit in the Commonwealth of Virginia states: "Within three months of the effective date of this permit . . . and continuing quarterly for a period of one year the permittee shall collect 24-hour composite samples of the effluent from [the specified] outfall, except in the cases of volatile organics, phenols and cyanide analyses where grab samples are required."

Balancing Stringency and Feasibility

The ease and cost of compliance can greatly affect the degree of compliance. For example, facility managers may want to comply, but will not be able to if the requirements are too expensive or the necessary technologies are not available. Policymakers will need to balance the desire to create stringent and ambitious requirements with the burden the requirements will create for industry.

In theory, more stringent requirements mean larger and possibly quicker environmental protection and restoration. Too stringent requirements imposed too early in the life of a program can generate disrespect for the requirements among engineers and plant managers who must make compliance decisions. Similarly, government officials may be reluctant to enforce such requirements. Strict requirements are more likely to be challenged and delayed in court. Such delays undermine the credibility of an enforcement program. Thus, ambitious and impractical requirements can seriously hamper enforcement.

In response to these considerations, requirements may be creatively tailored in their stringency, i.e., different requirements are specified for individual facilities or different segments of the regulated community based on such factors as size, pollution volume, and environmental or public health risk posed by the pollution. Requirements may also be implemented in a phased approach. The first phase involves less stringent requirements that will not be too great a burden for the regulated community to meet. At a minimum, this phase will help eliminate the competitive advantage for polluters. Some time later a second phase involving more stringent requirements can be implemented. Additional phases can be implemented later if desired.

Improving the Climate for Compliance

Two practices that have helped win the respect and approval of the regulated community and/or individual facilities subject to the requirements are:

- Demonstrating Value. Environmental officials use recognized scientific methods to demonstrate that a requirement will produce measurable environmental improvements.
- Demonstrating Options and Feasibility. Environmental officials provide technical information on the different technologies or other alternative approaches that can be used for compliance. Officials may also supply information to demonstrate the economic feasibility of using these technologies. This helps convince the regulated community that the requirements are reasonable. It also invites companies that supply these technologies to make sure the technologies are available to facilities that are subject to the requirement.

These scientific activities help build a willingness to comply within the regulated community. In some cases, however, no appropriate technologies exist and the requirements force the development of suitable technologies. In such cases, compliance often takes longer to achieve.

General Requirements

General requirements (i.e., regulations and general permits and licenses) will be most effective if they closely reflect the practical realities of compliance and enforcement, for example, if they:

- Are clear and understandable.
- Precisely define which sources or activities are subject to requirements.

- Precisely define the requirements and any exceptions or variances[3] in these requirements.
- Clearly address how compliance is to be determined by specifying test methods and procedures.
- Clearly state deadlines for compliance.
- Are flexible enough to be constructively adapted through individual permits, licenses, or variances to different regulatory circumstances.
- Are written clearly enough to be the basis of criminal prosecution (which is usually regarded as the most serious enforcement action).
- Are based on technology (e.g., control or monitoring equipment) and methodologies that are or soon will be available, reliable, and affordable.

Table 3-5 provides examples of basic questions that can be asked when general requirements are being drafted in law, regulations, and general permits or licenses to help make sure they will be enforceable.[4]

Size of the Regulated Community

The size of the regulated community can influence a program's ability to successfully enforce general requirements. The larger the regulated community, the greater the effort generally required for successful enforcement. Too large a regulated community can make it impossible to implement and enforce requirements. For example, a province in the Netherlands passed a law requiring companies that wanted to use a processing installation to dispose of their wastes to apply for an exemption. After the law passed, the government discovered that 100,000 companies producing wastes would need an exemption. Inspections alone would have required hiring an additional 200 to 300 inspectors. The provincial government decided to revise the regulation. Exemptions are no longer required. Companies must keep a record of their waste deliveries and periodically report information on the most hazardous wastes. Enforcement efforts now focus on the waste processors (about 1,000) rather than the waste producers.

Some pollution events involve a chain of facilities and/or individuals (e.g., manufacturers, distributors, users). In such cases, regulating the smallest "link" in the chain (e.g., manufacturers rather than users) can achieve the desired environmental results with much less effort.

Analyzing the Regulated Community's Ability To Comply

General requirements that are very specific, with little flexibility for modification when they are implemented at specific facilities, are easier to enforce but may not allow the economic flexibility that will encourage compliance. Policymakers will need to balance the advantage of specificity with the need for flexibility.

Both economic and technological factors determine how great a burden new requirements will pose to the regulated community. Some environmental programs (such as those in the United States) often commission an independent study to examine the economic and technological impact that proposed general requirements will have on the regulated community. Factors studied often include:

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[3]Environmental laws may contain provisions that allow a regulated source to petition the government for an exemption from a general requirement. This exemption is called a *variance* and contains specific terms and conditions similar to a permit. Facilities may request variances for many different reasons. For example, their operating conditions are different from those that were assumed when the standard was set, or peculiar physical circumstances (such as naturally contaminated intake water) make it impossible to comply.

[4]Not all the questions on Table 3-5 will be relevant to every situation. The table provides a tool to help clarify options and choices when drafting requirements.

TABLE 3-5. SAMPLE CHECKLIST FOR DEVELOPING ENFORCEABLE REGULATIONS, GENERAL PERMITS, AND GENERAL LICENSES

DEFINITIONS

- Does the regulation, general permit, or general license clearly define the regulated community, the regulated activities, and/or the regulated substances?
- Are any exceptions to defined terms narrow enough to avoid having the exceptions "swallow" the definitions?
- Are the definitions and exceptions precise enough so that enforcement personnel can identify instances of noncompliance?
- Are defined terms used consistently throughout the text of the regulation, general permit, or general license.
- Is the legal authority underlying the regulation, general permit, or general license clearly articulated?
- Are exceptions to the regulation, general permit, or general license defined precisely enough to make it clear which groups are exempted? If sources under a certain size are exempted, does the regulation identify how the size of a particular source is to be determined?

REQUIREMENTS (e.g., Standards)

- Are requirements or other end results measurable? Are the units of compliance clear?
- Are more enforceable requirements available, i.e., requirements that are easier to measure, less resource-intensive?
- Are exceptions clearly described? Is the calculation for exception clearly specified? If the regulation, general permit, or general license grants exceptions based on malfunctions or changes in local conditions, does it specify what emission levels may be excused, when, and who makes this determination?
- If changed circumstances may raise a requirement, does the regulation, general permit, or general license clearly specify what circumstances will change the requirement and how the requirement will be changed.
- If the requirement is an emission limit or concentration value, does it explicitly state the time frame associated with the limit (e.g., instantaneous, 3-hour average, daily)?

TABLE 3-5. SAMPLE CHECKLIST FOR DEVELOPING ENFORCEABLE REGULATIONS, GENERAL PERMITS, AND GENERAL LICENSES (continued)

MONITORING AND INSPECTION

- Does the regulation clearly state exactly what the regulated community is required to monitor? Do these requirements support the compliance goals of the environmental law? For example, if the compliance goal is to demonstrate that facilities are in compliance each day, does the regulation, general permit, or general license require daily self-monitoring and recordkeeping?
- What test methods are needed to determine whether a facility is in compliance? Are the methods clearly described? Are any allowable averaging times clearly specified?
- Does regulation, general permit, or general license make any attempt to falsify self-monitoring data as a separate enforceable violation?
- Does the regulation, general permit, or general license authorize inspection procedures that will be enable inspectors to gather data needed to determine compliance? Do these procedures cover entering a regulated facility, inspecting documents, and collecting samples?
- Will inspectors be readily able to determine which facilities are not in compliance?
- Will the requirements for inspection and self-monitoring help reduce enforcement costs and increase the effectiveness of inspections?

SELF-MONITORING/RECORDKEEPING/REPORTING

- Does the regulation, general permit, or general license provide a clear schedule for self-monitoring?
- Does the regulation, general permit, or general license state the methods to be used for self-monitoring?
- Does the regulation, general permit, or general license clearly state what data the regulated community is required to record and report?
- Will these data show whether or not a facility is in compliance? Will these data provide sufficient evidence to document a violation?
- Does the regulation, general permit, or general license provide a clear schedule and format for recordkeeping and reporting?

TABLE 3-5. SAMPLE CHECKLIST FOR DEVELOPING ENFORCEABLE REGULATIONS, GENERAL PERMITS, AND GENERAL LICENSES (continued)

- Are the reporting requirements frequent enough to allow timely response to a violation? Is the regulated community required to retain information long enough for enforcement purposes?
- Does the regulation, general permit, or general license make failure to maintain or report records a separate enforceable violation?
- Is the regulated community required to make records available to inspectors upon request?
- Are any exceptions to the recordkeeping and reporting requirements clearly spelled out?
- Will the requirements for reports, records, and inspection/monitoring techniques help reduce enforcement costs and increase the effectiveness of inspections?

DEMONSTRATING COMPLIANCE

- Does the regulation, general permit, or general license clearly describe what constitutes compliance and how compliance is determined? Is compliance determine by field inspections, desk reviews of reports submitted by the regulated community, or is the regulation, general permit, or general license self-enforcing?
- Does the regulation, general permit, or general license clearly state who (i.e., the government or the facility) is responsible for proving compliance or noncompliance? Can the enforcement program independently determine compliance? Can the program require the facility to perform certain tests and determine compliance?
- Does the regulation, general permit, or general license define time limits by which a member of the regulated community must reach compliance? Do the time periods have specified beginning and end points? If compliance is defined by occurrence of an event, rather than by a date, is the event discrete enough for an inspector to determine whether the facility is in compliance?
- Is the evidence required to prove a violation clearly described? Can third party data be used as evidence? Does the regulation, general permit, or general license describe the extent to which an inspector can use professional judgment in determining whether a facility is in compliance?
- If different government levels are involved in enforcement programs, does the regulation, general permit, or general license clearly describe the responsibilities of each level of government?

Economic Considerations:

- Which types of facilities are subject to the requirements?
- What equipment will be required to comply and how much will it cost to obtain, operate, and maintain?
- What changes in work practices will be necessary for compliance? How much will these changes cost?
- If the regulated community is required to monitor its own compliance activities, how much will this monitoring cost?
- Are there any short- or long-term economic benefits to the regulated community from compliance (e.g., income from recycled materials, development of more cost-efficient processes)?
- Is the regulatory scheme cost-effective compared to other approaches that could improve this segment of the environment?

Technological Considerations:

- What technologies may be used to comply?
- How reliable are these technologies?
- How available are these technologies?
- How easy is it to accurately operate these technologies?

Involving the Regulated Community and Other Interested Parties

Involving the regulated community in developing general requirements helps create support and reduce resistance and conflict. It can also make general requirements more practical and therefore more enforceable, and it publicizes the requirements at an early stage, which sets the stage for compliance. There are three basic ways to involve the regulated community: formal comment, informal negotiations, and field testing (see Table 3-6). Specific procedures and schedules for each approach are helpful to avoid the possibility that involvement of the regulated community could be used to delay implementation or unduly influence the results. Involving the nonregulated community (e.g., the general public and nongovernment organizations) can also be very helpful (e.g., to build public support — the importance of which is discussed in Chapter 5 — and to solicit creative ideas from knowledgeable groups).

Involving Enforcement Officials

The government personnel involved in drafting general requirements may not be involved in enforcement activities. Thus, the experience, wisdom, and concerns of both legal and technical staff involved in enforcement are not automatically available to the regulators.

Generally, special institutional channels and procedures are beneficial to ensure that enforcement staff will provide input as general requirements are being drafted. For example, a system could be set up so that enforcement program officials can track the status of projects to develop requirements. Special requirement development committees can be created that include both policymakers and enforcement officials. The committee can include representatives of all government levels (national, regional, provincial, local) that may be involved in enforcing the requirements. The committee members could be responsible for ensuring that the appropriate individuals within the enforcement program were involved in drafting and reviewing the requirements.

Comments on the proposed requirements and formal written responses to them are most useful if they are provided in writing to ensure that they are clearly understood and to establish a written record of the decisionmaking process.

Those responsible for developing general requirements can commission special studies to specifically analyze whether there might be problems enforcing the proposed requirements. Such a study should be kept confidential since it could reveal weaknesses in enforceability which could undermine enforcement efforts if publicized.

TABLE 3-6. WAYS TO INVOLVE THE REGULATED COMMUNITY IN DEVELOPING GENERAL REQUIREMENTS

Informal Consultations	Policymakers can consult with key representatives of the regulated community and nongovernment organizations informally before developing general requirements. These consultations can be helpful in sorting out future problems early, and in eliminating resistance.
Formal Comment	U.S. legal systems require the federal government to publish draft regulations and solicit comments from the regulated community and the public. Widely distributed, low-cost government periodicals provide advance notice that new regulations are being developed and announce when they will be available. Any organization or individual can easily obtain and review the proposed regulations when they are issued. Written comments from the public are usually accepted for a limited period of time (30 to 90 days in the United States) after the proposed regulation has been issued. The environmental agency prepares and publishes detailed responses to the comments. Many of the comments directly concern the difficulty or unanticipated effects of compliance. These comments provide regulators with an opportunity to rethink their approach. The formal responses to comments reassure commentors that their comments were considered.
Field Testing	In *field testing*, specific members of the regulated community volunteer to test general requirements to determine, for example, whether the requirements are clear and understandable, and/or the ease and cost of compliance. Policymakers can then make changes to the general requirements before they are finally implemented. Though field testing can lengthen the total time it takes to develop a general requirement, it can expose weaknesses that might otherwise render it unenforceable. As of 1991, field testing is being pilot-tested for use in the United States. Not all proposed requirements can realistically be field-tested. For example, those requiring substantial investment in new equipment may be impractical for field testing because of the cost and time required for planning, permitting, construction, and start-up of new equipment. Field testing may be more appropriate for requirements that concern operation and maintenance of existing equipment; recordkeeping and reporting by regulated sources; new methods of testing compliance; and/or the ability of existing equipment to meet new standards. Field testing of these types of requirements generally should not delay the process or developing the requirements or pose too great a financial burden on the prospective regulatory community. Where field testing is used, policymakers will need to determine who will fund it - the enforcement program, the test facility itself, or a trade association representing the regulated community.

Lessons learned about what makes existing requirements enforceable or unenforceable in a particular region or country can be recorded, studied, and communicated to those involved in developing new requirements. For example, selected general requirements could be reviewed one year after they became effective to analyze their enforceability and to make any adjustments to increase enforceability. Mechanisms could be created to "fix" existing general requirements if they are found to be difficult to enforce. It is also useful to establish an expedited process that can be used to correct specific types of deficiencies by making limited revisions to general requirements.

Coordinating with Other Environmental Requirements and Programs

Environmental requirements under one law can interfere with successful compliance under another law. For example, in the United States, regulations required electronics firms to stop chemical solvents in tanks from leaking into the ground water. Some firms complied by releasing solvents into the air, which created an air quality problem. In the Netherlands, flue gas scrubbing to reduce harmful air emissions can lead to discharges of contaminated water; treatment of contaminated wastewater can lead to yet another waste product requiring responsible processing.

Several rulemaking practices can be used to avoid such unintended effects. First, environmental laws can require policymakers drafting general requirements to specifically consider whether such effects are possible. Second, individuals who are knowledgeable about the different environmental areas can review the requirements. Third, the regulated community can be studied to see whether compliance could potentially shift the pollution from one environmental medium to another. If cross-media effects are discovered, the requirements can be modified to prevent or minimize these effects. Finally, requirements can be defined for all media at once.

Facility-Specific Requirements

Ensuring Enforceability

Facility-specific requirements are usually communicated through permits and licenses. They are often based on specific criteria established in laws, regulations, and/or guidance, but are customized to the specific conditions at the particular facility receiving the permit or license. These documents may cover only certain requirements (e.g., those concerning a single environmental media) or may comprehensive documents covering all requirements that the facility must meet.

Permits and licenses are intended to be practical documents that require or prohibit specific activities. To be enforceable, permits and licenses must generally be clear, precise, and unambiguous. Several practical steps can be taken to help ensure permits and licenses have these qualities:

- Train permit- and license-writers in the permit- and license-writing processes.
- Use standard forms to ensure that each permit and license contains all essential information.
- Where appropriate, use "model" permits or licenses. A model permit/license contains requirements that are generally applicable to a specific type of facility. The model is then slightly modified by the permit- or license-writer to develop an individual permit for a specific facility.
- Provide clear instructions to the permit- or license-writer about how to prepare the permit or license.

Table 3-7 provides a checklist that permit- and license-writers can use to ensure the enforceability of permits and licenses. Writers of facility-specific requirements will need to consider whether the permit conditions might conflict with those in any of the facility's existing permits or licenses. Conflicts and contradictions between different environmental permits and licenses can invite noncompliance. Multimedia permits or licenses that encompass all relevant environmental requirements in a single document can overcome this potential problem.

TABLE 3-7. SAMPLE CHECKLIST FOR DEVELOPING ENFORCEABLE PERMITS

GENERAL

- Is the length of time that the permit will be valid clearly stated? Is a date specified to indicate when the permit must be reissued and when an application for a new permit should be filed?
- Does the permit contain a provision stating that the permit must be modified if ownership of the facility changes, or if the facility makes changes to its regulated processes?
- Do the permit conditions conflict with conditions in any other permits that the facility has?
- Is there a provision specifying that the permit can automatically be revoked if it is discovered that the applicant deliberately submitted false, misleading, or incomplete information during the application process?
- Does the permit state whether the owner or operator will be liable for noncompliance?

REQUIREMENTS

- Are requirements or other end results measurable? Are the units of compliance clear?
- Does the permit specify that a modification will be required if the requirements or criteria change?
- If the requirement is an emission limit, does the permit explicitly state the time frame associated with the limit (e.g., instantaneous, 3-hour average, daily)?

MONITORING AND INSPECTION

- Does the permit clearly state exactly what the facility is required to monitor? Do these requirements support the compliance goals of the environmental regulation?
- What test methods are needed to determine whether the facility is in compliance? Are the methods clearly described and available to the permittee? Are any allowable averaging times clearly specified?
- Does the permit make any attempt to falsify self-monitoring data a separate enforceable violation?

TABLE 3-7. SAMPLE CHECKLIST FOR DEVELOPING ENFORCEABLE PERMITS (continued)

- Does the permit provide a clear schedule for self-monitoring?
- Does the permit authorize inspection procedures that will enable inspectors to gather data needed to determine compliance? Do these procedures cover entering a regulated facility, inspecting documents, and collecting samples?
- Will inspectors be readily able to determine which facilities are not in compliance?
- Will the requirements for inspection and self-monitoring help reduce enforcement costs and increase the effectiveness of inspections?

RECORDKEEPING/REPORTING

- Does the permit clearly state what data the facility is required to record and report?
- Will these data show whether or not a facility is in compliance? Will these data provide sufficient evidence to document a violation?
- Is the facility required to report noncompliance with permit requirements? If so, does the permit specify a deadline for reporting noncompliance and to whom noncompliance should be reported?
- Does the permit provide a clear schedule and format for recordkeeping and reporting?
- Does the permit specify to whom the information should be reported?
- Are the reporting requirements frequent enough to allow timely response to a violation? Is the facility required to retain information long enough for enforcement purposes?
- Does the permit make failure to maintain or report records a separate enforceable violation?
- Is the facility required to make records available upon request?
- Are any exceptions to the recordkeeping and reporting requirements clearly spelled out?
- Will the requirements for reports, records, and inspection/monitoring techniques help reduce enforcement costs and increase the effectiveness of inspections?

TABLE 3-7. SAMPLE CHECKLIST FOR DEVELOPING ENFORCEABLE PERMITS (continued)

DEMONSTRATING COMPLIANCE

- Does the permit clearly describe what constitutes compliance and how compliance is determined?
- Does the permit clearly state who is responsible for proving compliance or noncompliance (as established by applicable law)?
- Does the permit define time limits by which the facility must reach compliance? Do the time periods have specified beginning and end points? If compliance is defined by occurrence of an event, rather than by a date, is the event discrete enough for an inspector to determine whether the facility is in compliance?

Multimedia documents may also enable permit- and license-writers to prioritize requirements based on human health/environmental risk, the facility's resources for compliance, and feasibility.

The Permitting and Licensing Process

The credibility of environmental enforcement programs will generally be enhanced if facility-specific requirements are created as quickly as possible once an environmental program is in place. A long lag time can give the appearance of a weak environmental program and delay the application of environmental laws. Where start-up resources are limited, policymakers may wish to at least implement requirements for facilities that emit large quantities of and/or the most toxic pollutants as soon as possible.

The process for writing permits and licenses varies from one country to another, but generally includes the following steps:

- The facility provides information about its operations and emissions to the government agency.
- A permit- or license-writer reviews the information and requests additional information if necessary.
- The permit- or license-writer may inform interested parties (e.g., the local community) that a permit or license is being prepared.
- The permit- or license-writer may provide an opportunity for any concerned party to comment on whether a facility should receive a permit or license and what the requirements should be.
- If necessary, a negotiation process is used to resolve any disputes between the permit- or license-writer, facility, workers, local community, and/or other potentially affected parties.
- After sufficient information-gathering, discussion, and negotiation, the permit- or license-writer decides whether to issue the permit or license.
- There may be a sanction if the permit- or license-writer discovers that the applicant submits false, incomplete, or misleading information.

The permitting and licensing processes provide an opportunity to make sure the facility clearly understands what the requirements are and why it is important, both from an environmental and legal perspective, to meet them. The city of Amsterdam in the Netherlands uses a system of "prior consultations" to promote compliance. When a company seeks a permit, the municipal government inventories the company's activities, the potential pollution, and the environmental measures that should be taken. Other relevant government officials (e.g., from the Occupational Safety and Health Inspectorate, the Water Quality Manager, the Fire Department, the Environmental Inspectorate) are invited to participate. The inventory and draft and final permits are explained in detail to the company management. The process is designed to promote compliance by convincing the company of the necessity for taking environmental measures and by making it clear that noncompliance will be met with corrective action.

PART II: DESIGNING COMPLIANCE STRATEGIES AND ENFORCEMENT PROGRAMS

4. IDENTIFYING THE REGULATED COMMUNITY AND ESTABLISHING PROGRAM PRIORITIES

INTRODUCTION

Environmental requirements generally cover so many different organizations and individuals that it is usually impossible to identify and respond to all violations or to promote compliance among all members of the regulated community. No matter how generous a program's budget is, it will be small relative to the size of the regulated community. By establishing priorities for detecting and responding to violations and for promoting compliance, enforcement programs can operate as effectively as possible with the given resources. Priorities help target the available program resources to achieve maximum effect. Priority-setting involves answering questions such as:

- How should program resources be apportioned between compliance promotion and enforcement response?
- Which facilities should be inspected? How frequently should inspections be conducted? How comprehensive should these inspections be?
- Which violations should be responded to and how?

IDENTIFYING THE REGULATED COMMUNITY

An important step in developing program priorities is to identify which groups are regulated, and to understand as far as possible their sophistication, ability, motivation, and willingness to comply. An accurate profile of the regulated community helps policymakers focus the compliance strategy (including both compliance promotion and enforcement response) to optimize its effectiveness. It is also valuable for designing compliance monitoring schemes (see Chapter 6). The process of profiling the regulated communities makes the regulated community aware of the requirements, aware that the enforcement program officials know who they are, and aware that they will be expected to comply. This contact with the regulated community is the first step in creating a perception of an effective enforcement program. Thus, the process of identifying the regulated community can be a form of compliance promotion.

The need for and ability to identify the regulated community depends in part on the size and number of sources. If the regulated community consists of numerous small facilities (e.g., gasoline stations), it may be impractical or impossible to perform a comprehensive survey. In such cases, program officials may decide to identify a subset of the regulated community (e.g., only those facilities within a specific geographical area that is highly polluted). At a minimum, program officials can maintain records of complaints reported, which will help identify potential violators.

Important Information

The regulated community may include:

- Corporations.
- Small businesses.
- Public agencies/government-owned facilities.
- Individuals.

Information that can be useful in designing a compliance strategy includes:

- Identifying information, e.g., name of facility.
- Geographic location, e.g., longitude and latitude, street address.
- Type of business or operation.
- Any existing license, permit, or product registration numbers.
- Types and quantities of regulated materials or emissions at the facility.
- Risk associated with the releases (if this has been calculated).

Approaches To Gathering Information

There are several ways to gather information:

- Inventories. The enforcement program can inventory the regulated community either by requiring them to complete informational forms, or by sending inspectors to individual facilities to gather information. One disadvantage of inventories is that they place a resource burden on the government agency and/or the regulated groups. They require personnel time and thus can strain operating budgets. Another difficulty with inventories is keeping the information current. This has proven difficult in some programs. Government agencies will need to decide how often to survey the regulated groups. The need for information must be balanced with the cost of obtaining it. Laws can help ensure the quality of data by making it illegal to falsify data.
- Permit or License Applications. Initial information can be obtained in conjunction with the permitting and licensing processes if the requirements make it illegal to operate without a permit or license.
- Registration. In a registration process, facility managers are required to contact the environmental program to register particular information about their facility or product. The disadvantage of this process is that it may be more difficult to ensure that all appropriate facilities have registered. The degree of success in registering all appropriate facilities may depend, in part, on the consequences of not registering. Facilities will be more likely to register if there is a benefit for doing so (e.g., they get on a list for potential funding or contracts).
- Existing Records. If the facilities have been regulated under a previous or existing program, records about their characteristics and compliance status may be available in program files.
- Other Sources. Other government agencies or ministries as well as industry sources may have information about the regulated community, e.g., sales tax receipts, lists or surveys compiled by trade associations.
- Overflights. Aircraft overflights and/or resultant photographs may be used to inventory facilities subject to environmental requirements. Overflights are also useful to detect facilities that may not have registered for a program or filed required notifications, and to define the relative locations of wastewater discharges, air emissions, hazardous waste management facilities, water supply intakes, populated areas, etc., in specific geographic areas.

INFORMATION MANAGEMENT

However information is gathered, the enforcement program will need to develop a system (computerized if possible) to store, access, and analyze the information as needed. Information management can be enhanced by clearly assigning responsibility for maintaining a complete and accurate database to a specific person or group within the enforcement program.

The system can include not only the identifying information listed above, but also information on compliance (e.g., on compliance schedules, compliance status, violations, and outcomes of enforcement activities) as this information is gathered during the compliance monitoring phase of the program (see Chapter 6). The ability to analyze the information on a facility-by-facility basis is useful to determine patterns of noncompliance. The information may also be used to determine which facilities subject to the requirements have not applied for licenses or permits after being required to do so. Information in the database can be made available to all program personnel who may need it.

CONSIDERATIONS IN SETTING PRIORITIES

When setting priorities policymakers usually balance several important objectives. These may include:

- Protecting and restoring environmental quality and public health.
- Preserving the integrity of the program (i.e., making sure that the administrative and data-gathering aspects of the program are functioning effectively).
- Preserving the integrity of enforcement (i.e., maintaining an enforcement presence).
- Leveraging program resources by focussing on the smaller subset of facilities where changes can have the greatest impact in improving environmental quality and/or creating deterrence.

Often most of the pollution is caused by a small percentage of sources (e.g., 20% of the regulated community may cause 80% of the pollution). A program with limited resources can gain significant environmental benefit by focussing on these sources. However, in cultures where deterrence may also be an important factor contributing to environmental quality, policymakers will need to balance the specific environmental benefits to be achieved by this approach with the potential deterrent effect of broader coverage. Policymakers will also need to balance the strong deterrent advantages that targeting 100% of a particular group for inspection and enforcement will have on that particular group, with the broader deterrence that will result from selective inspection and enforcement of a smaller percentage of a larger group. For example, program managers may decide to inspect all facilities of a certain type in a particular region. At the same time, they may randomly inspect some facilities of that type in neighboring regions. Well-placed publicity suggesting that any facility of that type in any of the targeted regions may be subject to inspection, combined with publicity about actual inspections, could have substantial deterrent effect.

Table 4-1 describes different approaches to selecting individual facilities and groups of facilities for inspection and enforcement. These approaches are not mutually exclusive. They can be combined to develop very specific priorities. For example, program managers may decide to inspect all significant violators within a particular geographic area that have a history of violation. The selection process will be greatly enhanced by having an effective data management system that permits analysis of compliance patterns and comparison of sources.

WHO SHOULD SET PRIORITIES?

Various levels of government (national, regional, provincial, and local) are often involved in setting priorities. One challenge is how to reconcile national, regional, provincial, and local priorities. The relative involvement of these various levels in setting priorities will depend, to a large extent, on the structure of the enforcement program (e.g., whether it is centralized or decentralized, see Chapter 8). National involvement in priority setting helps ensure consistency and harmony among regional, provincial, and local priorities. National involvement improves the climate and potential for cooperation among the regions, provinces, and local governments for achieving their priorities. National consistency also creates a greater potential for harmonization with priorities of other nations.

Involvement of regional, provincial, and local governments in priority setting is critical. Individuals who are running the program at the regional/provincial/local levels will have the best sense of what problems pose the most significant threats to the environment and human health, and of what factors motivate or inhibit compliance. Therefore, priorities will be most meaningful if they take into account national, regional, provincial, and local needs and are flexible enough to accommodate all these perspectives.

COMMUNICATING PRIORITIES

Once priorities have been established, they will need to be communicated to all program personnel and to the regulated community. A broad understanding of priorities improves program efficiency and can promote compliance and contribute to deterrence. Unions, trade associations, and professional journals are good vehicles for communication. In the United States, for example, enforcement priorities, together with specific enforcement case and other information, are widely communicated through the *National Environmental Enforcement Journal*. Program officials must be

TABLE 4-1. APPROACHES TO SETTING PRIORITIES FOR INSPECTION AND ENFORCEMENT

PRIMARY GOAL: TO PROTECT AND RESTORE ENVIRONMENTAL QUALITY AND PUBLIC HEALTH

- **Significant Violators.** Program officials may decide to target *significant violators* (i.e., those believed to be causing the greatest harm or posing the greatest risk) for inspection and enforcement. The potential harm or risk is determined by both the quantity and toxicity of facility discharges and emissions or the potential impact of improper use, storage, and disposal of hazardous substances. This approach to targetting can achieve significant environmental benefits if it causes the violators to come into compliance. Significant violators are often well-known facilities. Successful enforcement can have substantial deterrent effect among other significant violators; however, it may not deter less significant violators who may come to believe they are "shielded" from enforcement by the focus on the other violators.

- **Type of Industry or Industrial Process.** Program officials may decide to target for inspection and enforcement those industries that emit high-risk pollutants into air, water, or land. The advantage of this approach is that teams experienced in the processes, practices, and materials of that industry can be formed to conduct inspections and to follow through on enforcement actions. This approach can also create a deterrent effect as members of this facility group learn that they will likely be subject to enforcement if they are out of compliance.

- **Geographic Considerations.** Geographic areas where there are substantial risks to human health or the environment can be targeted for inspections and enforcement. For example, program officials could decide to inspect and take action to achieve compliance among all facilities within a particular geographic area to achieve overall environmental quality goals for the area.

- **Type of Emission.** Particular types of chemicals or waste streams may pose substantial risks to human health and/or environmental quality. Program officials may decide to reduce exposure to these substances by targetting for inspection and enforcement all facilities that emit these chemicals.

PRIMARY GOAL: TO PRESERVE THE INTEGRITY OF THE PROGRAM

- **Reporting and Recordkeeping.** Inspections could be targeted to ensure that reporting and recordkeeping requirements are being followed. These inspections would not directly influence environmental quality, but do help ensure that the program has access to the information it needs for decision-making and strategy development.

PRIMARY GOAL: TO PRESERVE THE INTEGRITY OF ENFORCEMENT

- **Less Significant Violators and Lower Risk Areas.** Some selective enforcement activities may be allocated to less significant violators or areas with lower-risk emissions to maintain an overall enforcement presence.

- **Compliance History.** Analysis of compliance data may reveal patterns of noncompliance by particular facilities or types of facilities. Program officials can target violators exhibiting a particular pattern. For example, program officials may decide to specifically target repeat violators to demonstrate the program's commitment to keeping facilities in compliance once an enforcement action has been taken.

- **Follow-up Inspections and Enforcement.** Follow-up inspections are inspections at facilities that have agreed to take certain actions to correct a violation or otherwise improve environmental quality. Follow-up inspections (and enforcement, if needed) are conducted to ensure that the facility is meeting its commitments and achieving compliance.

careful, however, not to communicate information that would lead members of the regulated community to believe they are unlikely to be targeted for inspection and enforcement.

REVIEW AND REVISION

Priorities will need to change periodically in response to such factors as changes in the law and lessons learned under the program. Chapter 9 describes approaches to measuring and evaluating the success of an enforcement program. Policymakers will need to change priorities in response to problems identified during these evaluations to improve the effectiveness of the program.

5. PROMOTING COMPLIANCE

INTRODUCTION

Compliance promotion is any activity that encourages voluntary compliance with environmental requirements. Promotion helps overcome some of the barriers to compliance discussed in Chapter 2.

Most compliance strategies involve both activities to promote and enforce requirements. Policymakers will need to determine the most effective mix of compliance promotion and enforcement response.

Experience has shown that promotion alone is often not effective. Enforcement is important to create a climate in which members of the regulated community will have clear incentives to make use of the opportunities and resources provided by promotion. Experience in several countries has also shown that enforcement alone is not as effective as enforcement combined with promotion. This is particularly true for example when:

- The size of the regulated community far exceeds the program's resources for enforcement, e.g., when the regulated community consists of numerous small sources, such as individual gasoline stations.
- The regulated community is generally willing to comply voluntarily.
- There is a cultural resistance to enforcement.

Thus, promotion is an important element of most enforcement programs.

This chapter describes six approaches to compliance promotion:

- Providing education and technical assistance to the regulated community.
- Building public support.
- Publicizing success stories.
- Creative financing arrangements.
- Providing economic incentives.
- Building environmental management capability within the regulated community.

EDUCATION AND TECHNICAL ASSISTANCE

Education and technical assistance lay the groundwork for voluntary compliance. They are essential to overcome barriers of ignorance or inability that otherwise would prevent compliance. Education and technical assistance make it easier and more possible for the regulated community to comply by providing information about the requirements and how to meet them, and by providing assistance to help regulated facilities take the necessary steps for compliance. Education and technical assistance are particularly important in the early stages of a new requirement-based program, and whenever the program requirements change.

Approaches

Several types of information and messages can be communicated to regulated groups to promote compliance:

- Who is subject to requirements?
- What are the requirements?
- Why are these requirements important?
- What changes (including technical and managerial changes) must be made to comply with the requirements?
- How can these changes be made (e.g., What equipment should be used? How should this equipment be operated?)?
- What are the consequences of not complying?

If deterrence is an important element of program strategy, the information communicated can include not only educational information, but also reports of enforcement activities. This helps create an "enforcement presence" and an atmosphere of deterrence. This atmosphere will help provide an

incentive for sources to seek assistance and comply. Table 5-1 describes different ways to provide assistance to the regulated community.

Promotion can be enhanced by developing a communications plan which specifies what type of information will be communicated, how it will be developed, when it will be released, and how it will be distributed. Similarly, a technical assistance plan can be developed to indicate what assistance will be provided, to whom, and under what circumstances.

A situation in the Netherlands provides one example of successfully using assistance to solve a compliance problem. Commercial establishments in the Netherlands are required to dispose of their hazardous wastes through permitted processors. However, getting the waste to the processor has been a problem for small businesses. The processors are often unwilling to pick up small amounts of waste, and transporting small quantities of waste long distances to a processor places an economic burden on small businesses. Small companies were therefore often out of compliance with the hazardous waste rules. The Dutch government helped solved this problem by establishing a collection depot in nearly every town in the Netherlands. Both private citizens and small companies may discard their waste at these depots at regular times. This government-facilitated cooperative arrangement was instrumental in helping solve this compliance problem.

BUILDING PUBLIC SUPPORT

The public can be a powerful ally in promoting compliance. Public support can help create a social ethic of compliance. The public can also serve as watchdogs that alert officials to noncompliance. If the laws provide the appropriate authority, members of the public or nongovernment organizations representing the public can bring a citizen suit against noncomplying facilities. Public support can also help ensure that enforcement programs continue to receive the necessary funding and political support to be effective.

Building public support may be particularly important groundwork in societies where personal economic concerns compete with concern for environmental quality, or where there is a general lack of awareness about or concern for environmental problems. The public can be educated about causes and effects of pollution, its short- and long-term threats to human health and natural resources, and the costs to society. The extent of environmental damage may be surprising new information to the public.

Enforcement programs can build public support by developing and distributing information about environmental problems, the importance of compliance, program activities and successes, and ways the public can support the program. Program officials can also work with nongovernment organizations that represent the public to develop and distribute information and promote public involvement.

Nongovernment organizations can independently help promote compliance by publicizing information to increase public awareness of environmental problems and to build support and pressure for compliance.

PUBLICIZING SUCCESS STORIES

Program officials can provide an incentive for the regulated community to comply by publicizing information about facilities that have been particularly successful in achieving compliance. In societies where the public does support environmental protection, positive publicity about a firm's compliance success can enhance its reputation and public image. Such publicity helps create a positive social climate that encourages compliance.

TABLE 5-1. WAYS TO PROVIDE INFORMATION AND ASSISTANCE TO THE REGULATED COMMUNITY

- **Publications**, such as brochures and guidance manuals, that are created specifically for educational purposes and are distributed or made available to regulated groups.
- **Training Programs**, designed specifically to educate the regulated community about requirements and compliance.
- **Conferences** and other meetings that bring together officials from the enforcement program, regulated communities, and other interested parties.
- **"Hot Lines"** - dedicated telephone numbers that the regulated community can call to ask questions and receive information and assistance.
- **Technical Assistance**, which can be provided (1) by trained personnel who are available to visit individual members of the regulated community and assist them in making the necessary changes for compliance, (2) by inspectors who provide technical assistance as part of their inspection, and (3) by special assistance programs, set up for example at universities, that provide a central resource for information on and assistance with compliance.
- **Cooperative Arrangements** - Program officials can facilitate cooperative arrangements among small businesses that may want to comply but do not have the necessary resources to do so. An "arrangement" could include, for example, small facilities set up with program funds to serve as processing centers for pollutants that must be controlled or recycled. In such cases, policymakers will need to decide whether the services provided by the center are free or whether users must pay a charge.
- **Media Announcements** - information distributed through newspapers, television, or radio. This can include information about requirements, ways to meet requirements, and enforcement activities. Reports of enforcement activities can be particularly useful in deterring other potential violators. Public disclosure of violations and of the environmental benefits of the program's enforcement activities can help create public pressure for compliance.
- **Trade and Professional Associations**. These groups usually have established good communication networks through their publications and meetings. These activities provide forums for the regulated community and enforcement program personnel to exchange information and ideas.
- **Universities**. In some countries, universities are important centers for professionals. University publications or conferences, for example, may be important channels for educating the members of the regulated community.
- **Professional Journals**. Articles and announcements in these publications are an important way of reaching members of a specific professional community.

CREATIVE FINANCING ARRANGEMENTS

One barrier to compliance is cost. Facility managers may want to comply but may not be able to afford the cost of fulfilling the requirements. Creative financing arrangements that can help solve this problem include:

- Offset Requirements. This arrangement is essentially a tax on new investments. It requires investors interested in building a new facility to pay for modifications (e.g., installation of new process technology or controls on existing technology) that will reduce or "offset" pollution at an existing facility. Offset requirements should not be so expensive that they will discourage new investments. Some mechanism will be needed to ensure that the equipment in the existing facility is maintained and operated once it has been installed.
- Peer Matching. Peer matching is similar to offset requirements, but voluntary. In this case, investors interested in building a new facility are asked to "adopt" an existing facility and help it reduce pollution. Foreign investors, in particular, may be interested in this arrangement as a means of promoting good will in the local community and with government authorities.
- Sales of Shares. In situations where a government-owned facility is being privatized, the facility can raise money by selling shares in the facility to investors. This option can be particularly attractive if members of the local community are willing to invest. Proceeds can be used to renovate the facility so that it can comply with requirements and reduce or eliminate the impacts of pollution on the local community.
- Loans. Under this arrangement, institutions loaning money for new investments require that a certain portion of the loan be applied to restoration or protection of environmental quality.
- Environmental Bonds. Government or private owners of a facility subject to environmental requirements can issue bonds to raise money to finance the changes needed to meet the requirements. The owners pay interest on the loan to the bondholders until they are able to pay back the loan in full. In some countries, the interest earned from environmental bonds is tax-free. Environmental bonds are particularly appropriate in situations where the facility can recoup the cost of compliance by charging users of the service or product a fee (e.g., municipalities can charge citizens and industry for water use to help pay the costs of water treatment). This revenue helps assure bondholders that their loan will be repaid.

ECONOMIC INCENTIVES

Environmental programs can encourage compliance by providing economic incentives for compliance. This may be an effective approach in public agencies, which are less likely to be deterred by monetary penalties, since they are funded by the government. The benefit from compliance can be applied to the facility generally, or to an individual based on his or her performance. Incentives include:

- Fees. The facility is charged based on characteristics (e.g., amount, rate, toxicity) of its pollution (e.g., effluent, emissions, waste). Unlike monetary penalties, fees create an immediate cost to the facility for polluting. Fees generate revenue that can be used by the enforcement program. Fees should be high enough to deter pollution, otherwise they are no more than a "license to pollute."
- Tax Incentives. These are reduced taxes for costs associated with improving environmental quality, e.g., installing pollution control equipment, or changing a process to prevent pollution.
- Pollution Taxes. These taxes are based on the volume and/or toxicity of emissions, effluents, or wastes generated. Pollution taxes can be a purely economic alternative to setting standards.

- Subsidies for Complying Facilities. Facilities that comply with requirements can receive a subsidy to help defray the cost of compliance.
- Facility or operator bonuses for achieving better results than specified in permits, licenses, or regulations.
- Promotion points for senior managers in government-owned facilities achieving compliance.

BUILDING A FACILITY'S ENVIRONMENTAL MANAGEMENT CAPABILITY

Many nations and international organizations, including the U.S., Canada, the Netherlands, the European Community, the International Chamber of Commerce, and the United Nations Environment Programme, are promoting the concept of building internal environmental management capabilities within facilities to promote compliance and generally improve environmental quality. One specific approach to building this management capability is environmental auditing.

Environmental auditing is a periodic and comprehensive evaluation of the management systems and practices within a firm that affect environmental compliance. An environmental audit may examine the need for many different management changes including:

- Development of a formal environmental compliance plan or policy, including environmental management goals.
- Education and training programs for employees.
- Purchase, operation, and maintenance of equipment needed to achieve environmental goals.
- Creating specific jobs or departments within the facility dedicated to achieving environmental compliance.
- Budgeting and planning for environmental compliance.
- Developing monitoring, recordkeeping, and internal and external reporting systems.
- Developing internal communications and chain-of-command systems to ensure compliance.
- Assessment of hazards and risks posed by facility emissions and/or wastes.

Environmental auditing may be performed by specially trained employees or by an independent auditor that periodically visits and assesses the firm's compliance status and recommends changes if necessary. The concept of environmental auditing is gaining support as industry managers are finding good business reasons to run their operations in an environmentally sound manner. For example, many firms have discovered that valuable materials and energy can be recovered from waste streams and reused or resold. Other firms want to reduce their chances of being sued by the government or members of the public. In the U.S., securities' laws for corporations require that publicly owned firms assess and disclose their potential environmental liability; this requirement provides an incentive for internal environmental auditing.

Enforcement program officials are also promoting the concept of environmental auditing as an integral part of good business practice. Ideas for promoting environmental auditing include:

- Pilot projects to introduce the concept of auditing to small- and medium-sized firms.
- Environmental advisors that assist firms in setting up simple internal auditing systems.
- Regional auditing centers run by industry that can provide auditing and advisory services to members of that industry upon request.
- International workshops to bring the concept of environmental auditing to countries that would like to encourage this practice among their regulated facilities.
- Hiring university staff or other management specialists to develop programs to train auditors.
- Required disclosure of environmental liabilities (environmental impacts and violations) in the written statements made when a company is issuing stocks or bonds.

6. MONITORING COMPLIANCE

INTRODUCTION

Monitoring compliance — collecting and analyzing information on the compliance status of the regulated community — is one of the most important elements of an enforcement program. Monitoring is essential to:

- Detect and correct violations.
- Provide evidence to support enforcement actions.
- Evaluate program progress by establishing compliance status.

There are four primary sources of compliance information:

- Inspections conducted by program inspectors.
- Self-monitoring, self-recordkeeping, and self-reporting by the regulated community.
- Citizen complaints.
- Monitoring environmental conditions near a facility.

These are described below. Table 6-1 lists the advantages and disadvantages of these four sources. Additional information may come from reports from other national, regional, provincial, or local agencies that have related jurisdiction over the facility; requests for modifications to permits or licenses; and environmental audits reports provided by the facility. However information on compliance status is gathered, the enforcement program will need to develop a system (computerized if possible) to store, access, and analyze the information as needed (see Chapter 4).

INSPECTIONS

Inspections are the backbone of most enforcement programs. Inspections are conducted by government inspectors, or by independent parties hired by and reporting back to the responsible agency. Inspectors plan inspections, gather data in and/or around a particular facility, record and report on their observations, and (sometimes) make independent judgments about whether the facility is in compliance. Inspections can be very resource-intensive, therefore they require careful targeting and planning (see Chapter 4). By standardizing inspection procedures, enforcement officials can help ensure that all facilities are treated equally and that all the appropriate information is gathered. By specifying deadlines for preparing inspection reports, program managers can help ensure that reports can be made available to enforcement personnel without delay if there is a possibility of noncompliance.

Types of Inspections

Inspections may be routine (i.e., there is no reason to suspect that the facility is out of compliance), or "for cause" (i.e., a particular facility is targeted because there is reason to believe it is out of compliance). Inspectors may notify the facility prior to inspection or simply arrive unannounced.

There are many levels of inspection (see Table 6-2). At the simplest level, an inspector can simply walk through a plant. Inspections get progressively more complex and time-consuming as inspectors spend time in the facility to observe operations, interview plant personnel, and take samples for analysis. Inspection goals include:

- Identifying specific environmental problems.
- Making the source aware of any problems.
- Gathering information to determine a facility's compliance status.
- Collecting evidence for enforcement.

TABLE 6-1. ADVANTAGES AND DISADVANTAGES OF PRIMARY SOURCES OF COMPLIANCE INFORMATION

INFORMATION SOURCE	ADVANTAGES	DISADVANTAGES
Inspections	Provide the most relevant and reliable information.	Can be very resource-intensive. Must be carefully targeted and planned.
Self-Monitoring, Self-Recordkeeping, and Self-Reporting	Provide much more extensive information on compliance. Shift economic burden of monitoring to the regulated community. May increase level of management attention devoted to compliance within a facility.	Rely on integrity and capability of source to provide accurate data. Place a burden on the regulated community and increase the paperwork for the compliance program.
Citizens	Can detect violations that are not detected by inspections or industry self-monitoring, -reporting, and -record-keeping.	Sporadic. Cannot control the amount, frequency, or quality of information received. Only a few violations are noticed by citizens.
Area Monitoring	Useful for detecting possible violations without entering the facility. Also useful for determining whether permit or license requirements are providing adequate environmental protection.	Can be difficult to demonstrate a connection between the pollution detected and a specific source. Difficult or impossible to obtain precise information. Resource-intensive in areas of multiple sources.

TABLE 6-2. THREE LEVELS OF INSPECTIONS

LEVEL 1: WALK-THROUGH INSPECTION

This type of inspection is limited to a quick survey of the facility. Inspectors simply walk through the facility, for example to check for the existence of control equipment, observe work practices and housekeeping, and verify that there is a records repository. These inspections establish an enforcement presence, and can also serve as a screening process to identify facilities that should be targeted for more intensive inspection.

LEVEL 2: COMPLIANCE EVALUATION INSPECTION

This level involves a thorough inspection of the facility, but does not include sampling. It may include visual observations like those in Level 1, review and evaluation of records, interviews with facility personnel, review and critique of self-monitoring methods, instruments, and data, examination of process and control devices, and collection of evidence of noncompliance.

LEVEL 3: SAMPLING INSPECTION

This includes the visual and record reviews of the other inspection levels, as well as preplanned collection and analysis of physical samples. These inspections are the most resource-intensive.

- Ensuring the quality of self-reported data.
- Demonstrating the government's commitment to compliance by creating a credible presence.
- Checking whether facilities that have been ordered to comply have done so.

Inspections may focus on one or more of the following:

- Does the facility have an up-to-date permit or license?
- Has required pollution monitoring or control equipment been installed?
- Is the equipment being correctly operated?
- Are records of self-reported data properly prepared and maintained?
- Is the facility properly conducting any required sampling and analysis?
- Do the facility's management plans and practices support the required compliance activities?
- Are there any signs of willful violation of regulations and/or falsification of data? (Signs of willful violation or falsification include conflicting data, conflicting stories from different employees at the same facility, monitoring data for which there is no supporting record or documentation, claims that employees are ignorant of the regulations when company files show a knowledge of these requirements, and tips from employees or citizens in the local community.)

Inspections usually begin with an opening conference to explain the inspection process to the source. Some inspections end with a closing conference, in which the inspector may make facility managers aware of any violations, how to correct those violations, and what the future consequences of continuing noncompliance may be. Some enforcement programs do not allow closing conferences because they want to avoid the risk that information given by the inspector to the facility may somehow compromise future legal action.

Gathering Evidence

The inspector is responsible for gathering information to determine whether a facility is in compliance and collecting and documenting evidence that a violation may have occurred. This evidence is used to support the development of enforcement cases, as well as to help the inspector prepare for and give testimony when required. Therefore, inspectors are required to follow certain procedures to ensure that whatever evidence they collect will be admissible in a court of law. If standard procedures are not followed, there is a risk that the evidence may be rejected in a court of law and that the time and expense invested in building a case will have been wasted. Standard checklists are often developed for different types of inspections to ensure that the inspections properly covers all the necessary aspects and that inspections are fair and objective. Sometimes inspectors are responsible for determining whether a violation has occurred; sometimes this decision is made by program staff; in other cases, this decision is made by legal staff. Involvement of legal staff is essential when the requirement must be interpreted to determine whether there has been a violation. Because of concern about jeopardizing future enforcement cases, most inspectors in U.S. enforcement programs do not make decisions about whether a violation has occurred.

Written Inspection Report

During the inspection, the inspector records notes on every aspect of the inspection. The inspector may also gather additional evidence, such as physical samples, photographs, and copies of facility documents. As soon as possible following the inspection, the inspector prepares and files an inspection report, which references any additional evidence collected (photographs, documents, etc.). Any samples collected are sent to a laboratory for analysis. Analytical data are interpreted and presented in the final inspection report. This report serves as the basis for any testimony by the inspector and will likely be used as evidence should the case go to trial. Elements of an inspection report may include:

- The specific reason for the inspection.
- Who participated in the inspection.
- That all required procedures for conducting an inspection were complied with.
- The actions taken during the inspection, including the chronology of the actions.
- The evidence obtained during the inspection.
- Observations made during the inspections.
- The results of sample analyses related to the inspection.

Inspection Plan

An inspection plan developed before going on site helps ensure the quality and value of the inspection. An inspection plan provides an organized step-by-step approach to conducting the inspection. However, some flexibility is also important to allow the inspector to adapt to unanticipated situations at the facility. Table 6-3 lists some common elements of an inspection plan.

Targeting Inspections

Virtually any enforcement program, no matter how adequately funded, will never have enough resources to inspect all regulated facilities. Therefore, the major issue to be considered in creating an inspection program is how to target the scarce inspection resources to achieve maximum effect (see Chapter 4). Once a source has been targeted for inspection, program officials must decide what level of inspection to conduct.

In the United States, even very simple inspections have been found to have a significant deterrent effect if they succeed in identifying potential violations. Therefore, where appropriate, the U.S. program encourages simpler, less expensive inspections for sources that are thought likely to be in compliance. More expensive and intensive inspections are necessary for sources likely to be out of compliance. In selecting sources for more intensive inspections, enforcement programs can consider several factors:

- A source's potential to harm the environment.
- The complexity of the inspection needed to evaluate compliance.
- The compliance history of the source.
- The compliance history of similar sources.
- The availability of self-reported data.

Another strategy for conserving program resources is to use a "tiered" inspection level, i.e.: *Start with a less expensive inspection. If the source is in violation, take enforcement action to require the source to correct the violation and do more extensive self-monitoring. Inspect again at a more intensive level if the monitoring data indicate continued violation or if there is any other reason to suspect a violation.* This approach assumes cooperation by facilities. It shifts some of the burden of data gathering to the source and postpones resource-intensive inspections until lower-level inspection and monitoring warrant the expense.

Issues To Consider

Policymakers will need to consider many issues when designing an inspection program. For example:

- Selecting Facilities for Inspection. How are facilities chosen for inspection? What proportion of inspections should be "routine," and what proportion should be "for cause?" How can routine inspections be fairly and neutrally distributed across the regulated community?
- Announced Versus Unannounced Inspections. When should inspections be announced versus unannounced? If inspections are announced, the facility's managers can make sure that the information requested and any essential plant

TABLE 6-3. ELEMENTS OF AN INSPECTION PLAN

- OBJECTIVES
  - What is the purpose of the inspection?
  - What is to be accomplished?
- TASKS
  - What information will be reviewed (e.g., permits, licenses, regulations, previous inspection reports, information on the history of compliance)?
  - What coordination with laboratories, other environmental programs, lawyers, or government agencies is required?
  - What information must be collected?
- PROCEDURES
  - What specific facility processes will be inspected?
  - What procedures will be used?
  - Will the inspection require special procedures?
  - Has a quality assurance/quality control plan been developed and understood?
  - What equipment will be required?
  - What are responsibilities of each member of the team?
- RESOURCES
  - What personnel will be required?
  - Has a safety plan been developed and understood?
- SCHEDULE
  - What will be the time requirements and order of inspection activities?
  - What will be the milestones? What must get done vs. what is optional to get done?

personnel will be available when the inspector arrives. Thus, announced inspections can be more efficient. Unannounced inspections, however, are more likely to discover the plant's true operating conditions. They are particularly useful when there is reason to believe the source is in violation and is misrepresenting its self-reported data or likely to destroy evidence if the inspection is announced.

- Frequency of Inspection. How often should a particular facility be inspected? Policymakers will need to balance the cost of inspections with the expected compliance benefit. Sources that are more likely to fall out of compliance may require more frequent inspections.
- Who Should Inspect. Which level of government will provide the most effective inspection force: national, regional, provincial, or local? Would it be more effective for the government to contract with an independent group to perform inspections?
- Legal Authority. What legal authority do inspectors have to enter facilities? What procedures will be taken if the facility refuses to allow the inspection?
- Role of the Inspector. Should the inspector determine whether a violation has occurred or should the inspector simply gather information? The inspection may fail to meet the needs of enforcement if the inspector's role is not clear.
- Comprehensiveness of the Inspection. What data should inspectors gather? Should inspections focus on data needed under a particular regulation, permit, or license, or should inspectors try to gather data relevant to several environmental regulations, permits, or licenses? The advantage of focussed inspections is that it is easier to train inspectors for these inspections. The disadvantage is that more focussed inspections may fail to detect noncompliance in areas not specifically covered by those inspections.
- Inspection of Related Activities. To what extent should inspectors also gather data on company activities that may affect environmental quality, such as preparedness for chemical emergencies, pollution prevention activities, and waste minimization programs?
- Objectivity of the Inspector. Care is needed to ensure that inspectors do not become so familiar with and sympathetic to certain facilities and facility managers that their objectivity is compromised. Some enforcement programs periodically rotate inspectors to avoid this possibility.
- Closing Conference. Should the inspection include a closing conference? A closing conference provides an opportunity for the inspector to make company managers aware of any violations and what the consequences of continuing noncompliance would be. In some cases, the inspector may suggest ways to correct the violation. A closing conference helps educate the regulated community. However, information conveyed by the inspector could undermine subsequent legal taken against the facility. For example, facility managers could claim the information conveyed by the inspector contributed to noncompliance if the information was in any way misleading or not sufficiently comprehensive. Program lawyers may prefer that inspectors draw no conclusions and convey no information about compliance.
- Documenting the Violation. How should the information gathered by the inspector be documented? The information's value to the program may depend on such factors as clarity, completeness, and utility as evidence in a court of law.
- Inspector Training. How can inspectors be adequately trained to gather accurate information and (if relevant) provide technical assistance? What training is needed to ensure the health and safety of inspectors?
- Data Quality. How can the quality of data be assured? Ways to help ensure data quality include initial reporting procedures, processes for review and confirmation of the data, and schedules and procedures for auditing the program's reporting and

recordkeeping system. Guidance should also be developed to ensure the quality of the laboratory analysis supporting the inspection.

- Consistency of Sampling and Analytical Procedures. Use of consistent methods and procedures for sampling and analysis is important to ensure data quality, fairness of enforcement, and the value of the results for legal proceedings. Both inspectors and analytical laboratories will require guidance on appropriate procedures.

Inspector Training

Inspectors have a great influence on the success of a compliance monitoring program. They are responsible for identifying facilities that are out of compliance and gathering evidence for enforcement actions. They are often the only environmental officials that a facility manager will ever see in person, and may serve as the key witness in enforcement cases. Inspectors require training in a broad range of skills: legal, technical, administrative, and communication (see Table 6-4). They will need to be technically competent in the subject(s) of the inspections they perform, and skilled in obtaining crucial facts and in collecting and preserving evidence of noncompliance. Also, they need to be skilled in managing projects, working in a team, and effective communications ranging from entry conversations to complex cross examination in cases of serious violations. The training and integrity of inspectors are therefore critical to effective enforcement programs.

Support Resources

The kind of equipment required to support an inspection varies depending on the type and purpose of inspection. Equipment needed may include:

- Safety equipment to protect the inspector from any hazards that may be encountered during the inspection.
- Documentation equipment, including cameras, film, pocket calculators, tape measures, and logbook, to record information and evidence.
- Sampling equipment to take samples of soil, water, and/or air.
- Analytical equipment to analyze the environmental samples taken at the facility.

SELF-MONITORING, -RECORDKEEPING, AND -REPORTING BY THE REGULATED COMMUNITY

Self-monitoring, -recordkeeping, and -reporting are three ways in which sources can be required to track their own compliance and record or report the results for government review. Increasingly, self-monitoring, -recordkeeping, and -reporting are being recognized as providing essential data to supplement and support inspections.

- In *self-monitoring*, sources measure an emission, discharge, or performance parameter that provides information on the nature of the pollutant discharges or the operation of control technologies. For example, sources may monitor groundwater quality, or may periodically sample and analyze effluent for the presence and concentration of particular pollutants. Sources may also be asked to monitor operating parameters on pollution control equipment (such as line voltage and electrical current used) that indicate how well the equipment itself is operating. Operating parameters are generally inexpensive to monitor and provide reliable data that give a more accurate and representative picture of emissions than occasional sampling and analysis of the emissions themselves. This type of monitoring has proven to be a cost-effective way for enforcement programs and sources to assure themselves that controls are operating correctly.

TABLE 6-4. ELEMENTS OF INSPECTOR TRAINING

BASICS OF COMPLIANCE AND ENFORCEMENT

Introduction to Environmental Compliance
Summary of Environmental Requirements
Components of an Enforcement Program
Organizational Structure for Compliance and Enforcement
Role of the Inspector/Field Investigator

LEGAL ASPECTS OF RESPONSE INSPECTIONS AND ENFORCEMENT

Enforcement Litigation
Entry and Information-Gathering Tools
Evidence

PRE-INSPECTION ACTIVITIES

Pre-inspection Planning and Preparation
Administrative Considerations for Inspectors

ON-SITE ACTIVITIES

Gaining Entry and Opening Conference
Ensuring Inspector Health and Safety
Records Review
Physical Sampling
Interviews
Observations and Illustrations
Closing Conference/Travel Security Measures

POST-INSPECTION ACTIVITIES

Reports and Files
Laboratory Analysis
Enforcement Proceedings

COMMUNICATIONS

Serving as an Expert Witness at Enforcement Proceedings
Press and Public Relations
Communications Skills

- *Self-recordkeeping* means that sources are responsible for maintaining their own records of certain regulated activities (e.g., shipment of hazardous waste).
- *Self-reporting* requires that sources provide the enforcement program with self-monitoring or -recordkeeping data periodically and/or upon request.

Self-monitoring, -recordkeeping, and -reporting provide much more extensive information on compliance than can be obtained with periodic inspections. Self-monitoring, -recordkeeping, and -reporting requirements also shift some of the economic burden of monitoring to the regulated community, and they provide a mechanism for educating this community about the compliance requirements. Self-monitoring, -recordkeeping, and -reporting may also increase the level of management attention devoted to compliance, and may inspire management to improve production efficiency and prevent pollution.

Self-monitoring requires that reliable and affordable monitoring equipment be available to the regulated community. Self-monitoring, -recordkeeping, and -reporting rely on the integrity and capability of the source to provide accurate data. The data will be misleading if the source either deliberately falsifies the information or lacks the technical capability to provide accurate data. Therefore, programs using self-monitoring, -reporting, and -recordkeeping will need to establish some way to help ensure accuracy, e.g., by requiring self-monitoring only in facilities with the appropriate technical capability, by developing quality control standards for monitoring and recordkeeping, etc.

In the United States, self-monitoring, -recordkeeping, and -reporting are often required by environmental regulations (see Table 6-5). Enforcement officials translate these regulatory requirements to facility-specific requirements via permits. Information from self-monitoring, -recordkeeping, and -reporting is used primarily to target inspections. It is also sometimes used as a basis for enforcement actions. Usually, it is supplemented by inspections to corroborate the accuracy of the data.

Issues

To use self-monitoring, -recordkeeping, and/or -reporting as part of an enforcement program, program officials will need to provide guidance to the regulated community on the standard procedures, methods, and instruments that should be used to obtain the data; on how frequently data should be collected; and on how the data should be recorded and reported. Some issues to consider in developing these requirements are:

- Cost. What will the cost and paperwork burden be to industry and government? What will the benefits be? Are the benefits worth the cost?
- Technology Requirements. Is technology available for monitoring? How much does it cost? How accurate and reliable is it? How easy is it to learn how to operate the equipment to get accurate results?
- Data Use. How exactly will enforcement officials use the data? What information will the data provide about violations or compliance success? What is the minimum amount of data that will be useful?
- Extent of Requirements. Should the source be required to report all data or just data that indicate a potential violation? Proponents of the "all data" requirement argue that more management attention will be paid with routine reporting and that enforcement officials can better control the quality of data. Proponents of exceptional reporting argue that this is much less expensive, and that the "all data" approach may discourage sources from voluntarily conducting additional monitoring that they feel may be valuable.
- Public Disclosure. Should the self-reported data be made available to the public? Most U.S. environmental laws require that self-reported data be made available to the public. This publicity effectively deters violations and failure to report, especially when the law also gives citizens the right to sue sources.

TABLE 6-5. EXAMPLES OF SELF-MONITORING, -REPORTING, AND -RECORDKEEPING REQUIREMENTS IN THE UNITED STATES

WATER POLLUTION. The national water program relies heavily on source self-monitoring and self-reporting. All sources discharging into the surface waters of the United States must perform self-monitoring and self-reporting. The regulations require monitoring of discharges, use of a standard form to report monitoring results, a minimum reporting frequency of once a year, and a requirement to maintain records for at least 3 years. The specific parameters, methods, and frequency of monitoring and reporting are tailored to the source and described in the individual permits. For example, a permit may require a source to perform continuous monitoring of temperature, flow, and pH, and specific sampling of the effluent for solids, organic compounds, toxic metals, and oil and grease. Most major sources must report on a monthly or quarterly basis. Minor sources generally report once or twice a year.

DRINKING WATER. Drinking water suppliers must test drinking water for specific chemical, microbiological, and radioactive contaminants for which national standards have been set. To ensure quality, all systems must use government-certified laboratories to perform the monitoring. The frequency with which the sampling results must be reported to the government varies depending on the size of the water system and the contaminant being monitored. The reporting frequencies range from daily to every 3 or 4 years. Once reported, the results become public information. If a standard is exceeded, the public health consequences of the violation must be reported by the system to its customers.

AIR POLLUTION. Because of the high cost of monitoring air pollutants, program officials have generally imposed minimal self-monitoring requirements and limited self-reporting requirements for stationary sources. Stationary sources may be required to test their emissions for sulfur dioxide, nitrogen oxides, carbon monoxide, lead, particulate matter, volatile organic carbons, and other specific hazardous air pollutants. This testing may be occasional, periodic, or (where technology allows) continuous. For mobile sources (i.e., engines from motor vehicles), self-monitoring and self-reporting requirements are imposed primarily on institutions that can easily affect the emissions of many vehicles at once, e.g., the vehicle manufacturers, maintenance shops, and fuel suppliers.

HAZARDOUS WASTE. This program regulates tens of thousands of different waste handlers who handle a wide variety of wastes. Self-monitoring, -reporting, and -recordkeeping are very important because of the immense size and variability of the regulated community. A single recordkeeping document must accompany a shipment of hazardous waste wherever the waste travels. Each individual handler of the waste (generators, transporters, storage facilities, treatment facilities, and disposal facilities) must sign the document and keep one copy. Generators must keep a copy of this document for 3 years after shipment. Every other year, generators must also provide information on their activities to their authorized state agencies or to the U.S. Environmental Protection Agency. Treatment, storage, and disposal facilities must perform self-monitoring. For example, groundwater monitoring is often required to detect leaks at landfills; waste incinerators may be required to continuously monitor the temperature and carbon monoxide content of their emissions.

PESTICIDES. This program focuses on ensuring that pesticides are tested and registered. It has important recordkeeping requirements so that inspectors can make sure that the product labels and advertising do not violate any restrictions on pesticide use. Pesticide manufacturers must also test their product for potential health effects and submit and maintain testing records to help trace any harmful effects of pesticides in use back to the manufacturer.

- Self Certification. Should senior industry officials be required to certify that the facility is in compliance? Increasingly, U.S. laws are introducing this requirement and making senior officials personally liable for false reporting. This is an effective way to elicit the attention and cooperation of senior management in achieving compliance. Such requirements will be meaningful only if they are backed by clear guidance on and procedures for self-certification. Self-certification may also include a requirement to report violations and efforts to correct them.

CITIZEN COMPLAINTS

Citizen complaints are an important way of detecting violations that are unlikely to be detected through self-reporting or inspections. These include violations that take place in isolated areas, and illegal acts within an organization. Enforcement programs can help educate and train citizens to detect and report problems. One U.S. program encourages citizen involvement by providing a financial reward for any report that leads to a conviction of the violator.

AREA MONITORING

Information on compliance status can be gained by area monitoring, i.e, monitoring environmental conditions near a facility. Area monitoring includes ambient monitoring, remote sensing, and overflights.

Ambient Monitoring

This includes any monitoring to detect pollutant levels in the ambient air, ground, or surface waters near a facility. The main problem with ambient monitoring is that it can be difficult to demonstrate that the pollutants measured came from a particular facility. Ambient monitoring is most useful when a source is the only significant polluter in the area, or when its emissions have a characteristic composition that serves to "fingerprint" them. In these cases, ambient measurements clearly suggest potential violations at a facility, and can be used to target inspections. In the United States ambient data are rarely used alone to prove a violation because of the difficulty of proving a connection with the source.

Remote Sensing

Remote-sensing techniques can provide positive proof from outside a facility's boundaries that the facility is violating an environmental requirement. The most developed remote-sensing technique is laser-beam radar, also known as "Lidar," for "light detection and ranging." This technique measures the density of a smoke plume by day or night. It is relatively inexpensive compared to other air monitoring methods such as stack tests.

Overflights

Both satellites and aircraft can be used to measure ambient and source-specific conditions. Satellites have been useful for detecting large discharges of water pollutants and are most often used to trigger inspections. Satellite images are usually too coarse to calculate the magnitude of the violation.

Aircraft overflights can be even more effective than satellites for compliance monitoring. Airborne cameras can detect and record the densities, temperatures, and area of air and water discharges. Even some biological effects in streams can be detected from the air. Perhaps most significantly, overflights can be used to observe the physical characteristics and work practices at a

facility. For example, dikes and fences can be observed and checked against permit records for correct location and condition. Practices such as the loading and unloading of hazardous materials can be observed. Production levels can be estimated from the air and compared to assumptions used in permits or licenses.

Overflights may also be used to detect facilities subject to environmental requirements, to detect facilities that may not have registered for a program or filed required notifications, and to define the relative locations of wastewater discharges, air emissions, hazardous waste management facilities, water supply intakes, populated areas, etc., in specific geographic areas.

Overflights have been used very successfully for enforcement in the Netherlands. Airplanes and helicopters have been used to detect illegal discharges and dumps, many of which are clearly visible from the air. The responsible parties are notified about the detected violations and requested to act where necessary. Success was considerably improved when helicopters began to work simultaneously with ground vehicles. Sighted violations were reported to ground personnel who then immediately proceeded to the scene and dealt with the situation. Periodic aerial photographs of wrecked yards and dump sites have provided a good record of these operations and how they are changing. Where appropriate, these photographs can be used in later investigations.

7. ENFORCEMENT RESPONSES TO VIOLATIONS

INTRODUCTION

Experience with environmental programs in many countries has shown that *enforcement is essential to compliance*. This is because, in any society, many people will not comply with the law unless there are clear consequences for noncompliance.

Enforcement by government programs seeks to correct violations and create an atmosphere in which the regulated community is stimulated to comply because the government has demonstrated a willingness to act when noncompliance is detected. This atmosphere also helps stimulate members of the regulated community to prevent pollution and minimize waste so that they are no longer subject to requirements. If authorized, a government enforcement program may also seek to correct and redress actual or potential harm caused by environmental pollution, whether or not the pollution violates a specific requirement.

Government programs are but one means of enforcement. In some countries, private citizens and groups are empowered by law to bring enforcement actions against violators. Insurance companies and financial institutions may require facilities to comply to be eligible for insurance or a loan. Finally, social norms can be an effective method of ensuring compliance in societies where there is strong social sanction for noncompliance with environmental requirements. For example, the public may choose to boycott certain products if they believe the manufacturer is harming the environment. All these nongovernmental forms of enforcement can greatly enhance a government program. Policymakers can strengthen government enforcement efforts by considering these other forces for enforcement when designing government programs. For example, government officials may benefit by working closely with concerned nongovernment groups on enforcement. Policymakers may also wish to focus government enforcement activities on areas not adequately covered by the private sector.

Government enforcement capabilities will generally be most effective if they are in place and used when requirements become effective. Delaying enforcement can undermine the credibility of the program and make it difficult to create an atmosphere of deterrence. Enforcement is often needed throughout the life of a regulatory program, to achieve initial compliance and to ensure that those who have achieved compliance maintain it.

Enforcement can be controversial because so much is at stake environmentally and economically. To be successful, enforcement requires support at all government levels and within all sections of the program. Governments can demonstrate their commitment to enforcement by enacting enforceable requirements and by providing clear and consistent support. Program personnel can demonstrate their commitment by taking violations seriously because of their threat to the environment and to the integrity of the legal system.

This chapter describes a range of authorities and response mechanisms for enforcement. Most countries with enforcement programs have some but not all of these authorities and mechanisms. Each program must work within the possibilities offered by the legal system or systems under which the program operates. This chapter describes issues to consider when doing this, and suggests new possibilities that may be appropriate to consider when the legal system is being changed.

THE RANGE OF RESPONSE MECHANISMS AND AUTHORITIES

All enforcement programs benefit from a range of authorities and response mechanisms so that program officials can appropriately respond to the many different types of violations and circumstances that will arise.

Authorities

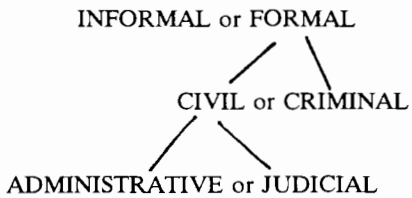
In most countries, the range and type of response mechanisms available will ultimately depend on the number and type of authorities provided to the enforcement program by environmental and related laws. These authorities provide the legal basis for enforcement which is essential to the power and credibility of an enforcement program. Table 7-1 summarizes a range of authorities that may be useful for an enforcement program. This list is an amalgam of the authorities of several different enforcement programs in the United States and other nations.

Response Mechanisms

Enforcement mechanisms may be designed to perform one or more functions:

- Return violators to compliance.
- Impose a sanction.
- Remove the economic benefit of noncompliance.
- Require that specific actions be taken to test, monitor, or provide information.
- Correct environmental damages.
- Correct internal company management problems.

Response mechanisms generally fall into the following categories, described below:



INFORMAL MECHANISMS

Informal responses include phone calls, site visits, warning letters, and notices of violations (see Table 7-2). Informal responses advise the facility manager what violation was found, what should be done to correct it, and by what date. The goal of informal action is simply to bring the violator into compliance or to initiate formal legal process. Informal responses themselves do not penalize and cannot be enforced, but can lead to more severe response if they are ignored.

FORMAL MECHANISMS

Formal enforcement mechanisms are backed by the force of law and are accompanied by procedural requirements to protect the rights of the individual. Formal mechanisms are either civil or criminal as described below. As indicated by the diagram, above, civil actions may be either administrative (i.e., directly imposed by the enforcement program) or judicial (i.e., imposed by a court or other judicial authority). Authorities to use formal enforcement mechanisms must be provided in environmental laws.

Civil Administrative Enforcement

Civil administrative orders are legal, independently enforceable orders issued directly by enforcement program officials that define the violation, provide evidence of the violation, and require the recipient to take corrective action within a specified time period. If the recipient violates the order, program managers can usually take further legal action using additional orders

TABLE 7-1. TYPES OF ENFORCEMENT AUTHORITIES[1]

Remedial Actions

- Authority to impose a schedule for compliance
- Authority to permanently shut down part of an operation
- Authority to temporarily shut down certain parts of operations or practices
- Authority to permanently shut down an entire facility
- Authority to temporarily shut down an entire facility
- Authority to deny a permit
- Authority to revoke a permit
- Authority to require a facility to clean up part of the environment
- Emergency powers to enter and correct immediate dangers to the local population or environment
- Authority to seek compensation for damage caused by the violation

Other

- Authority to require specific testing and reporting
- Authority to impose specific labeling requirements
- Authority to require monitoring and reporting
- Authority to request information on industrial processes
- Authority to require specialized training (e.g., in emergency response to spills) for facility employees
- Authority to require a facility to undergo an environmental audit

Sanctions

- Authority to impose a monetary penalty with specified amounts per day per violation
- Authority to seek imprisonment (a jail term)
- Authority to seek punitive damages or fines within specified limits
- Authority to seize property
- Authority to seek reimbursement for government clean-up expenses
- Authority to bar a facility or company from government loans, guarantees, or contracts
- Authority to require service or community work to benefit the environment
- Limitations on financial assistance

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[1]This list of enforcement authorities is a hybrid and does not appear in any one law or country. It is an example of the types of authorities that may be made available to enforcement officials through environment laws. These authorities may be either direct authorities or the authority to seek a court order to impose the sanction.

TABLE 7-2. TYPES OF INFORMAL RESPONSE

- **Telephone Call.** This is perhaps the simplest way to notify or remind a source that a violation has occurred and must be corrected. The caller may also request that the violator follow up with a letter that describes what action was taken.

- **Inspection.** An inspector can make facility managers aware of a problem and provide assistance in correcting the problem. At the same time, an inspector can gather data about the problem. This better prepares the program for taking further action, if necessary, and displays the program's seriousness about following up if compliance is not achieved.

- **Warning Letters.** Warning letters let source managers know that they are violating the law and must correct the situation or face adverse legal action and consequences. A warning letter may also describe the potential sanctions of continued noncompliance; require a response from the violator detailing the corrective action taken; and/or suggest that the violator meet with compliance officials to discuss compliance. Other responses are considered if the violator fails to take advantage of this opportunity within a reasonable time.

- **Notice of Violation.** Notices are more formal than warning letters. They notify a source that a violation has been detected and often give a deadline for taking corrective action. Notices of violation also warn about legal action and consequences that may follow if the violator does not take action by the deadline.

or a court system to directly force compliance with the order. What distinguishes administrative response from judicial response, defined below, is that the legal action is handled by an administrative system within the organization responsible for implementing the enforcement program. The administrative processes may be similar to those provided by the court system. Two advantages of administrative enforcement are that it does not require coordination with a separate judicial agency and the administrative organization's own administrative law judges are usually more knowledgeable because they are dedicated to addressing environmental problems. Therefore, administrative actions are usually resolved more quickly and require less time and expense than judicial actions. Administrative orders are not self-enforcing, however. If the order is not complied with, further enforcement action will need to be pursued through the judicial system.

Field citations are administrative orders issued by inspectors in the field. Typically, they require the violator to correct a clear-cut violation and pay a small monetary fine. Field citations are much like traffic tickets. Depending on the procedural steps defined by the program, the violator can either appeal the citation, pay it, or risk more formal enforcement action. Field citations are generally used at the provincial and/or local levels to handle more routine types of violations. They can be a relatively efficient means to enforce certain violations that are clear and do not pose a major threat to the environment. To issue field citations, inspectors need training to identify the particular violations for which citations can be written.

Civil Judicial Enforcement

Civil judicial enforcement actions are formal lawsuits before the courts. Some nations with civil enforcement authorities rely exclusively on civil judicial actions to enforce environmental laws. Other nations have adopted both administrative and judicial mechanisms to carry out civil enforcement authorities. Where available, administrative enforcement is generally preferred as a first response (with some exceptions), because judicial lawsuits are far more expensive, require more staff time, and may take several years to complete. However, judicial enforcement has several advantages. It is often perceived as having greater significance and therefore has more power to deter potential violations and to set legal precedents. Also, the courts are often uniquely empowered to require action to reduce immediate threats to public health or the environment. Thus, judicial enforcement can be essential in emergency situations. The courts also play an important role in enforcing administrative orders that have been violated, and in making final decisions regarding orders that have been appealed. Therefore, when administrative enforcement mechanisms are available, civil judicial responses are generally used against more serious or recalcitrant violators, where precedents are needed, or where prompt action is important to shut down an operation or to stop an activity.

Criminal Enforcement

Criminal judicial response is generally considered appropriate when a person or facility has knowingly and willfully violated the law, or has otherwise committed a violation for which society has chosen to impose the most serious legal sanctions available. These responses seek criminal sanctions, which may include monetary penalties and imprisonment. Nations such as Canada that now rely exclusively on criminal law for environmental enforcement have also developed creative sentencing provisions to introduce other remedies and sanctions (such as community service and required environmental audits) designed to "punish" the wrongdoing (see Table 7-1). While criminal response can be the most difficult type of enforcement, it can also create the most significant deterrence since it personally affects the lives of those who are prosecuted and carries with it a significant social stigma. Criminal cases require intensive investigation and case development. They require proof that a violation has occurred and may require proof that an individual or business (through its employees) was knowingly and willfully responsible for the violation. Specially trained criminal investigators may be necessary to develop criminal cases.

The ability to apply criminal enforcement in environmental cases depends on a country's legal system and on whether appropriate authority is provided in environmental or other laws. For example, in the United States there are generic statutes that make it a crime to report false information. Conversely, in Hungary only a "natural person" can be criminally liable, and a facility or business is not considered to be a "natural person." Under these circumstances, criminal enforcement is difficult because the facility itself is not answerable for the "crime" and it is often difficult to identify which individuals within the facility were responsible.

THE ENFORCEMENT PROCESS

Protecting Basic Rights

Every nation has its own unique legal system, laws, and culture. However, common to all democratic institutions are processes to balance the rights of individuals with the government's need to act, often quickly, on behalf of the public. Several processes may be used to ensure fairness of enforcement responses:

- Notice. Some enforcement programs require that a notice of violation be issued before any formal enforcement action is pursued. The violator may be offered an opportunity to (1) contest the finding of violation and/or (2) to correct the violation within a specified time frame to avoid further government action.
- Appeals. There are often several points in the enforcement process when a violator can appeal either the finding that there is a violation, the remedial action required by the enforcement program, or the severity of the proposed sanction.
- Dispute Resolutions. Most enforcement responses are bound to create disputes between program officials and facility representatives. In such cases, programs often use special procedures designed to resolve disputes (see Table 7-3).

In general, the more an enforcement action may deny an individual his or her rights, the more protections the enforcement process provides and the longer the process may take before final action is initiated.

Supporting the Enforcement Case

Many issues may be raised and disputed in typical enforcement actions. Enforcement officials should always be prepared to:

- Prove that a violation has occurred.
- Establish that the procedures and policies were fairly and equitably followed and that the violator is not being unduly "picked on."
- Demonstrate the underlying environmental or public health need for the requirement being violated. (This need is often met when the requirement is developed. However, it may be necessary to reiterate the importance of compliance with the requirement to justify and support an enforcement case. This is particularly true when a case is being argued in front of an independent decisionmaker who is not familiar with the requirement or its environmental or public health basis.)
- Demonstrate that a remedy for the violation is available (e.g., affordable pollution control equipment). (Even though this is not usually the responsibility of the government, this information can be important to negotiations.)
- Demonstrate the ability of the violator to pay, e.g., showing that a "poor" facility is owned by a wealthy parent company.

TABLE 7-3. TYPICAL DISPUTE RESOLUTION PROCEDURES

- ***Face-to-face negotiations between program officials and the violator either:***
  - *Before formal enforcement response is pursued.* At this point in the process, the discussion usually focuses on whether there has been a violation. If agreement is reached, there may also be a discussion of the required response and schedule for response.
  - *After formal administrative or civil judicial enforcement action is initiated but before it is final.* These negotiations are carried out during settlement discussions. The resulting agreement, e.g., an administrative order or a settlement, is placed before a final decisionmaker, e.g., a judge, for approval.
- ***Presentations before a decisionmaker*** (often a judge or hearing examiner) who makes a decision about a fact or legal point after hearing both sides of the issue.
- ***Use of third parties.*** Third parties (e.g., mediators, arbitrators, and facilitators) may be called upon by enforcement officials or by agreement of the parties to break an impasse. An experienced third party can change the dynamics, provide new perspectives, and propose possible solutions. Specialized third parties are particularly useful for resolving highly complex technical issues that a lawyer or judge would be unlikely to fully understand.

The Role of Negotiation

Negotiation is an integral part of enforcement. In the United States, most enforcement cases are settled through negotiation rather than by unilateral decision. Negotiation enables both the facility and the concerned party or parties to consider the correctness of the facts, the circumstances of the case, and the variety of alternative responses. Negotiation provides an opportunity to obtain additional information and correct misinterpretations before pursuing legal action. Negotiation also provides an opportunity to reach a solution that satisfies all parties. Enforcement actions create a stimulus and context for discussion and resolution. Enforcement provides the framework in which solutions can be negotiated. Negotiation can enhance compliance by sending a signal to the regulated community that, while pursuing enforcement response, the government is willing to be responsive to the concerns and difficulties faced by the regulated community in achieving compliance and to work cooperatively to develop a satisfactory solution.

Negotiations will generally be most effective if there remains a real possibility of litigation. In some cultures or situations it may be very important to keep this threat real so that facilities do not use negotiations as a means of delaying compliance. Program officials can keep this threat real by maintaining a strict schedule for negotiations and a parallel preparation for legal action.

The negotiation process will vary from one culture and program to another. Some negotiations may be face-to-face between enforcement officials and the violator. Others may involve a variety of concerned parties (e.g., representatives of the local community, workers, nongovernment organizations). In some negotiations (e.g., an impasse), an experienced third party may be used to change the dynamics, provide new perspectives, and propose possible solutions that had not previously been considered. Table 7-3 describes some typical dispute resolution procedures.

The result of negotiations is a *settlement* — a documented official resolution to the situation, e.g., an "administrative consent order" or a "judicial consent decree" in the United States. In the U.S. system, negotiation is most often used within the context of legal enforcement proceedings. This results in a legally binding agreement between the violator and the enforcement program or a negotiated agreement that must be submitted to a court for consideration and final approval.

Two types of enforcement responses are usually not negotiated. One is a request by enforcement officials for information from the violator. This is usually not controversial and therefore does not require negotiation. The other is the exercise by the enforcement program of emergency powers to protect public health and the environment. In this case, there is no time to negotiate.

Role of the Public To Ensure Accountability

In some countries (e.g., the United States), the public has a right to comment on enforcement agreements, orders, and decrees before they are final. The public may also be allowed to gain access to final enforcement actions. Public involvement is one way to ensure that violators are treated fairly and consistently. Indeed, it is the violators themselves who are most likely to review other previous enforcement actions that have been taken and attempt to use them during negotiations as a precedent if they are favorable.

CREATIVE SETTLEMENTS: LEVERAGING ENFORCEMENT FOR BROADER RESULTS

Agreements can include any provisions that the enforcement program is authorized to impose on a violator. Depending on their legal authority, environmental officials may have some latitude to develop creative approaches to solving environmental problems. Creative settlements can also be used to leverage a single case to gain either greater environmental benefit or greater

deterrence than would have occurred with a conventional settlement. Examples of creative settlements are described below.

Creative settlements are often linked to some limited reduction in monetary penalty or an agreement to extend compliance schedules. Creative settlements may also be sought for violators with limited ability to pay or violators that demonstrate a strong level of cooperation with the government. U.S. policy limits the amount of penalty reduction allowed in creative settlements because of need to maintain some level of penalty to preserve deterrence and recover the economic benefit of noncompliance.

Pollution Prevention

Pollution prevention settlements involve an agreement by the facility to convert to practices or processes that reduce or eliminate the generation of pollutants and wastes at the source. Pollution is prevented when the volume and/or the toxicity of pollutants is reduced. In manufacturing, for example, pollution prevention includes activities such as substituting chemicals, reformulating products, modifying processes, improving housekeeping, and recycling on site.

Pollution prevention projects may directly correct the violation or may reduce pollution not connected with the original violation. Pollution prevention settlements help ensure that violations will not recur and/or they reduce the total risk that a facility's operation poses to public health or the environment.

Pollution Reductions Beyond Compliance

Settlements can be negotiated in which the violator agrees to reduce pollution further than the level required to comply with the requirements. For example, a violator may agree to install more effective control technologies that reduce the overall discharge of pollutants.

Environmental Auditing

Environmental auditing is a periodic, systematic, documented and objective review at a regulated facility of its compliance status, management systems and/or overall environmental risk. Auditing has been encouraged by many nations and by the International Chamber of Commerce as an essential tool for regulated facilities to ensure compliance and to effectively manage their environmental risks (see Chapter 5).

Environmental audits have been required in several enforcement actions in the United States for one of two purposes. First, they have been used where a source shows a clear pattern of violations that suggests a management problem. In such cases, a settlement may include an agreement that the source pay for an environmental audit to identify and correct the internal management problems that led to the repeated violations. Second, if a violation is likely to be repeated at other operations owned by the same company, a settlement may include an agreement (1) that the company or a third-party auditor will audit for that violation at the other facilities owned by the company, and (2) that any violations will be reported and corrected.

Environmental Restoration

Environmental restoration settlements not only repair the damage done to the environment because of the violation, but also further enhance the environment around the facility. If the environmental damage caused cannot be restored, the settlement may require the facility to restore a comparable environment in another location.

Publicity

In public awareness settlements, the violator agrees to undertake some activity to increase the awareness by the regulated community of the need for compliance and/or ways to achieve compliance. For example, the violator could sponsor a series of seminars to provide information to a specific industry group about how to correct violations common to that industry. The violator could also sponsor public announcements on television and radio to discourage violations or to describe how new technologies can be used to correct violations. In the United States, violators who sponsor public awareness projects must also agree to clearly state to the public that the project was undertaken as part of the settlement of a lawsuit brought by the government.

Training

Training settlements can be used to correct internal compliance problems within a company or organization. Violators that are industry leaders may be required to design and conduct compliance training for others within the same industry group.

Escrow or Bond for Sources Unable to Pay Penalties

This type of settlement is useful for facilities that cannot afford to pay the monetary penalty normally imposed for the particular type of violation. In such cases, the facility agrees to put some money into an escrow or bond account which will be used to fund remediation or other activities to improve environmental quality.

ENFORCEMENT RESPONSE POLICIES

Enforcement response policies describe how various enforcement authorities will be used to respond to the many different types of violations and violation situations. Such policies are important to ensure fairness. Fairness is particularly important when assessing monetary penalties. The perception and fact of fairness is critical to the credibility of an enforcement program, and also helps otherwise reluctant staff make what are often difficult decisions to demonstrate government will and resolve to enforce environmental laws. Key issues to consider when drafting an enforcement policy are discussed below.

Criteria for Noncompliance

Whether a facility is in compliance is not always obvious. Specific guidelines and criteria are often needed for determining compliance from noncompliance. These standard criteria help ensure that all members of the regulated community are treated equally and fairly.

SELECTION OF APPROPRIATE ENFORCEMENT RESPONSE

Selecting an appropriate enforcement response raises several difficult issues, discussed below, which often need to be addressed in an enforcement response policy. (These issues may already have been addressed in the wording of the authorities provided by the environmental laws.)

When Should Civil or Criminal Responses Be Used?

This issue is relevant only to countries that have or are considering implementing both civil and criminal authorities. In the United States, criminal enforcement actions are generally

reserved for actions that deserve punishment, rather than correction, e.g., where the violation is intentional and willful. Criminal actions are also used to ensure the integrity of the regulatory scheme, e.g., for facilities that operate without a permit or license. Cases reserved for criminal enforcement typically include:

- Falsifying documents.
- Operating without a permit.
- Tampering with monitoring or control equipment.
- Repeated violations.
- Intentional and deliberate violations (e.g. decisions to violate based on greed).

In the Netherlands, both criminal and administrative charges can be brought for violations of environmental laws. Serious violations are usually met with direct criminal charges. Many Public Prosecutors believe that criminal charges should be imposed the second time a company is found to be out of compliance. Admininstrative sanctions include shutting down all or part of a company's operations and fining the company for each day it remains out of compliance. Criminal sanctions include prison sentences, fines, complete or partial shut down of operations, confiscation of property, and publicizing the court's verdict.

When Should a Sanction Be Imposed?

For certain types of enforcement response, it may be sufficient to negotiate a compliance schedule where the violator agrees to return to compliance and/or clean up a pollution situation by a certain date. When deterrence is important to a program's compliance strategy, maximum impact will be gained if each enforcement action is used to send a deterrence message to the regulated community. Sanctions help send this message. However, sanctions may not be appropriate for violations that are not preventable, or that are too minor to focus government resources on the legal process that necessary to impose a sanction. These considerations need to balanced in deciding when to impose a sanction.

Should a First Enforcement Response Include a Sanction?

There are two basic approaches to this issue. One approach does not seek a sanction for first violations but imposes a stiff sanction if noncompliance continues. This approach is based on the belief that every facility should be given at least one opportunity to correct its problems before it receives a sanction. This approach is most successful when violations are easy to detect, and when the enforcement program has an excellent track record of detecting violations, diligently following up on violators to verify compliance, and imposing stiff sanctions for continued noncompliance.

The second approach is to impose a sanction for first violations. This is based on a belief that lack of a penalty may encourage facilities to postpone compliance activities until the violation has been detected. This approach is essential for violations that are difficult to detect.

What Type of Sanction Should Be Used?

Depending on the authorities provided in environmental laws (see Table 7-2), enforcement officials often have several types of sanctions they may impose for violations. The enforcement policy will need to provide guidance on when these various types of sanctions are appropriate.

Monetary Penalty. Monetary penalties are the most common sanction used in enforcement response. An enforcement policy will need to provide guidance on how to calculate an appropriate penalty for various types of violations. There are several bases on which to calculate an appropriate monetary penalty (see Table 7-4). In reality, monetary penalties are often a combination of these factors. Table 7-5 provides one example of a penalty calculation using a variety of factors.

TABLE 7-4. FACTORS THAT MAY BE USED TO CALCULATE A MONETARY PENALTY

Gravity of the Actual or Potential Harm to the Environment and/or Human Health. Gravity-based penalties are graduated to reflect the seriousness of the violation. This sends a deterrence signal to the regulated community: the more serious the violation, the greater the penalty will be. Gravity may be calculated based on factors such as:

- Volume of release.
- Toxicity of release.
- History of noncompliance.
- Environmental and/or public health risk or impact.
- Importance to maintaining the integrity of the enforcement program.

Economic Benefit. Penalties that, at a minimum, recover the economic benefit a violator may have gained by not complying remove the economic advantage for noncompliance. This type of penalty is important to maintain fairness by ensuring that facilities that comply are not economically disadvantaged by doing so. It also removes the economic incentive for noncompliance. At the national level and in some states in the United States, enforcement policies require recovery of economic benefit.

Ability to Pay. Enforcement officials must often consider a violator's ability to pay when calculating a monetary penalty. Penalties that are large compared to the facility's resources could force a facility to shut down. Bankruptcies can harm the overall community. Facilities that are given a severe monetary penalty may also threaten to move to another area where environmental regulation and/or enforcement is more lax. In such cases, enforcement officials may want to consider the deterrence benefits of severe penalties against the cost and hardship that the resulting unemployment would cause in the local community. Public pressure may have substantial impact on the monetary penalty level when jobs are threatened. Asking for substantial penalties also raises a risk that violators may choose to contest the penalty in court rather than pay it. A series of payments can be arranged in situations where a violator may have difficulty paying the full penalty at one time. Financial penalties are less likely to deter public agencies since they are not profitmaking ventures.

Other Factors. These include:

- Degree of cooperation by facility personnel with environmental officials.
- Whether the violation was self-reported by the facility.
- Degree of remorse by the responsible parties.
- The strength of the case. A weak case is less likely to withstand appeals on the part of the violator. In such cases, enforcement officials may lower the penalty to avoid making it worthwhile for the violator to try to appeal the penalty.

TABLE 7-5. SAMPLE WORKSHEET TO CALCULATE A MONETARY PENALTY[1]

Facility Name: _____

Money the Facility Saved by Not Complying with Regulations		Example
Costs avoided	_____	$10,000
Costs postponed	_____	$ 5,000
Total	*(a)* _____	*(a)* $15,000

Seriousness of the Violation

PAYMENT CALCULATION MATRIX

		Extent of Deviation from Requirement(s)		
		High	**Medium**	**Low**
Potential for Harm	**High**	$5,000 to $4,000	$3,999 to $3,000	$2,999 to $2,200
	Medium	$2,199 to $1,600	$1,599 to $1,000	$999 to $600
	Low	$599 to $300	$299 to $100	$99 to $20

Penalty required based on potential for harm and extent of deviation from requirement (use the above matrix and personal judgment to determine the appropriate amount):	*(b)* _____	*(b)* $3,000
Adjustment for the Duration of the Violation		
Number of days of noncompliance	*(c)* _____	*(c)* 50
Total = [*(b)* x (20%)] x *(c)*	*(d)* _____	*(d)* $30,000
SUBTOTAL		
Subtotal = *(a)* + *(d)*	*(e)* _____	*(e)* $45,000
Penalty Adjustment Factors[2]		
1. Degree of cooperation (+/-)	*(f)* _____	*(f)* +5%
2. History of compliance (+/-)	*(g)* _____	*(g)* -5%
3. Supplemental environmental projects[3] (+/-)	*(h)* _____	*(h)* -10%
4. Ability to pay (-)	*(i)* _____	*(i)* -5%
Total = [*(f)* + *(g)* + *(h)* + *(i)*] x *(e)*	*(j)* _____	*(j)* -$6,750
TOTAL PENALTY		
Total penalty = *(e)* + *(j)*	_____	$38,250

[1]Loosely based on a worksheet used for a U.S. environmental program.
[2]Adjustments may range from -20% to +20% for factors 1, 2, and 3, and from -100% to 0% for factor 4. Selection of appropriate percentages is based on subjective judgment and should be fair relative to adjustments made when calculating penalties for other similar violations.
[3]Supplemental environmental projects are projects the facility is conducting or will conduct to benefit the environment (see description in this chapter).

Denial or Revocation of Permits or Licenses. Program officials can deny an application for a permit or license or revoke an existing permit or license. This would require a facility to cease at least part of its operation or be in clear and direct violation of the law.

Shutdown of Operations. Program officials may be able to shut down operations. The threat of a shutdown can be an effective deterrent, particularly in a free market economy where shutdowns directly affect profits.

Jail Terms. Criminal sanction (e.g., jail terms) for managers or employees of violating facilities can be an extremely effective deterrent. Criminal sanctions can only be imposed where allowed by the legal system. This penalty has substantial public support in the United States. In the United States, for example, criminal sanctions can be sought if someone willfully circumvents a requirement or fraudulently reports data. Some criminal cases can be costly and involve complex procedures. However, in the United States, their deterrent effect has been so great that even a relatively small number of successful cases have caused other companies to change their management ethics. Under U.S. Sentencing Guidelines, sentences for environmental crimes can be reduced if the corporate official can demonstrate a comprehensive and committed corporate compliance program. This set of conditions in the United States seems to be improving corporate concern for compliance.

Denial of Government Funding. In this penalty, violators are placed on a list of firms from which government agencies will not purchase goods and services, or provide loans or guarantees. The lists are shared with other government agencies that purchase services or goods from industry. The name is removed once the firm returns to compliance. In the United States, this sanction has been very effective in several difficult compliance cases.

Negative Publicity. As part of a settlement, violators may be required to publicize information about the violation. For example, a company may be required to pay for a full-page advertisement in local or national newspapers to proclaim their guilt. Company executives may be ordered to speak in public about their wrongdoing. In countries with strong public concern for environmental quality and a free market economy, negative publicity can have substantial economic implications for a facility. Negative publicity can also cause a corporation to lose prestige. Research indicates that potential loss of prestige can be a powerful deterrent factor. In the United States, enforcement officials are increasingly using publicity about violations as an enforcement tool.

Other Sanctions. Other possible sanctions are listed in Table 7-1.

What Enforcement Responses Are Appropriate for Government-Owned and/or -Operated Facilities?

Enforcement by one government organization against another government organization is usually difficult for many reasons. For example, monetary penalties for many government facilities are paid for out of a central budget. The loss of this money generally has little impact on the individual facility's operation. In government systems, it can be difficult to hold managers and operators of facilities accountable for failing to comply with requirements. In some countries or regions, facilities may be receiving conflicting signals — one government organization may require compliance while another may demand high levels of production. It can be politically difficult for one government organization to enforce against another. Also, in many countries government organizations cannot be sued by citizens or other government organizations for failure to comply with environmental requirements. For all these reasons, managers of government facilities may have little incentive to ensure that their facilities are in compliance with environmental requirements.

The United States has some experience in enforcement against government-owned facilities. With a few exceptions, the U.S. federal government has waived its special immunity from prosecution and has given both state governments and citizens the right to take the federal government to court if it does not comply with federal, state, or local environmental requirements. The U.S. Environmental Protection Agency (U.S. EPA — the federal agency responsible for

environmental protection) can pursue enforcement against other government agencies, but it generally does not seek penalties nor does it take civil judicial action against sister agencies. The U.S. EPA can develop bilateral administrative compliance orders and agreements with other agencies, and also issues some unilateral administrative orders if these orders are not disputed. The U.S. EPA can also hold government officials criminally responsible for their actions. To resolve disputes, the U.S. EPA uses an internal appeals system within the Executive Branch of the government. The enforcement process is useful to force agencies to budget for environmental problems. Public pressure has also been a powerful force to gain federal government compliance.

In the mid-1980s, the U.S. EPA and states also began to aggressively enforce against municipalities. Creative solutions were found to enforcement problems, including creative financing arrangements that enabled municipalities to meet the requirements. The penalties imposed through enforcement also helped induce some local communities to vote to increase their taxes in order to raise money to finance pollution control.

Federal facility operators are criminally liable for environmental crimes, e.g., improper disposal of hazardous waste. In the past several years, the U.S. EPA has been much more aggressive about enforcing against federal facility operators. These cases have generally received a great deal of public attention.

8. CLARIFYING ROLES AND RESPONSIBILITIES

INTRODUCTION

Enforcement frequently involves many different groups, including government agencies, citizens groups and nongovernment organizations, and industry associations. A key element in any strategy is defining the roles and responsibilities of the various groups involved. This chapter discusses key issues involved in defining roles and responsibilities:

- How should responsibilities for enforcement be divided among the various levels of government (national, regional, provincial, and local)? To what extent should a program be centralized (i.e., run at a national government level) versus decentralized (i.e., run at local government levels)?
- Which government agencies will be involved, e.g., environmental agencies, health agencies?
- Should there be separate enforcement programs for different environmental media (e.g., air, water, land) or one or more integrated programs covering several media?
- To what extent should a program make use of citizens and other nongovernment resources?
- To what extent should technical program staff and attorneys be integrated within a single organization?

DIVIDING RESPONSIBILITIES AMONG GOVERNMENT LEVELS

A basic issue in developing enforcement programs is to what extent to centralize responsibilities for enforcement at the national level or decentralize them at more local levels. There are advantages and disadvantages to both centralization and decentralization. A national presence in enforcement helps ensure that at least minimum standards for environmental requirements are met; that the program is consistent and fair throughout the country; and that national resources are available to support enforcement programs. Involvement of provincial and local governments in enforcement is important because these levels are closest to the actual environmental problems and best able to efficiently identify and correct them.

Most environmental enforcement programs in different countries are decentralized to take advantage of (1) local knowledge of facilities and their operations, and (2) the greater resources available at the local level. Despite this bias toward decentralization, some programs are centralized because of a clear need for national involvement, e.g., to handle transboundary pollution problems, or where local competition to create favorable conditions for industry may lead to lax enforcement at the local level, or where unique expertise concentrated at the national level is needed to implement the program. For example, control of most air pollution sources is decentralized in the United States. However, enforcement of U.S. environmental requirements pertaining to manufacture of automobiles and fuel additives is centralized, as are enforcement programs concerning the production of toxic chemicals and pesticides in the United States.

Roles and relationships between the national government and local governments can develop in many different ways, ranging from decentralization to centralization to various combinations of both approaches. Table 8-1 shows different approaches used in various countries. Two models from the United States and the Netherlands are presented below. These models attempt to combine some of the advantages of both centralization and decentralization. The United States uses a system of parallel responsibility for several of its enforcement programs. Under this system, states are given primary responsibility for enforcement, but the national government retains parallel authority and responsibility. The Netherlands has developed a system where responsibilities are divided among national, regional, and local governments. Divided or decentralized responsibilities require cooperation and communication between government levels.

TABLE 8-1. APPROACHES USED IN DIFFERENT COUNTRIES TO PARTITION GOVERNMENT RESPONSIBILITIES FOR ENFORCEMENT[1]

	Decentralized	Centralized	Divided Responsibilities	Parallel Responsibilities
Canada				
Toxic Chemicals/Hazardous Waste		X		
All Other	X			
Germany				
Great Britain				
Transboundary Chemical Waste	X			
Air		X		
Japan				
Norway				
Poland	X			
Sweden				
The Netherlands				
Nuisance Act	X			
Hazardous/Toxic Chemical Wastes			X	
United States				
Air Stationary Sources				X
Automobile Emission and Fuels Standards		X		
Water Discharges				X
Toxic Chemical Testing/Manufacture Release Reports		X		
Pesticides Registration		X		
Pesticides Use Enforcement/ Certification for Field Applicators	X			
Hazardous Waste Generation/Treatment/Disposal				X

[1]See text for description of approaches.

The U.S. Experience: Parallel Responsibility with the Primary Role Delegated

Most environmental programs in the United States establish a relationship between the national and state governments. Usually, the national government formally approves the state environmental program as meeting established standards for implementation. From this point on, the state program has the primary role for implementing the enforcement program, but the national government retains parallel authority and responsibility and can intervene if the state program is not meeting certain criteria. In a few cases, such as the air program, the national government can directly grant approval to a local government to run a program. A few U.S. laws do not allow the national government to delegate responsibility to the states. In these cases, the national government may develop "cooperative agreements" with states to make state involvement possible.

The U.S. Environmental Protection Agency (U.S. EPA — the national government agency responsible for protecting the environment) is authorized by most environmental laws to define criteria for an acceptable environmental program. These criteria generally cover three areas: legal authority, resources, and personnel. The U.S. EPA works with states to help them develop programs that meet these criteria. Once a state program meets these criteria, the U.S. EPA approves the program and state authority to run the program. If a state program has not been approved by the time enforcement must begin, the U.S. EPA will run the program from the national level until the state program is approved.

Typically under this system, states are responsible for monitoring environmental quality and compliance, developing compliance strategies, targeting and performing inspections, enforcing against violators, and verifying the quality of monitoring and compliance data. As of 1991, approximately 70-90% of day-to-day inspections and 70% of formal enforcement actions were performed by states.

Even though states have primary responsibility for running approved programs, the U.S. EPA always remains responsible for meeting national environmental standards and for ensuring that national laws are being enforced. To meet this responsibility, the U.S. EPA oversees the states' performance and may take direct enforcement action under certain circumstances. This can be a sensitive area if the U.S. EPA intervenes in situations where a state believes it is doing a good job.

The U.S. EPA provides states with funding for staff and equipment through an annual grant process. The U.S. EPA sets national program priorities annually in consultation with the states and then works with states to develop state/U.S. EPA agreements that specify enforcement priorities that include national, regional, and state priorities.

Advantages

This system of parallel responsibility with the primary role delegated has several advantages:

- Program Quality. The system maintains a continuous national presence. This helps ensure that certain minimum program standards are met across the country regardless of the resources and capabilities of the individual states.
- Technical Capabilities. Because it is a national government agency, the U.S. EPA can often provide states with technical capabilities that are not available at the state level.
- National Consistency. Involvement at the national level helps ensure that enforcement is practiced fairly and consistently across the nation.
- Deterrence. Knowledge that the national government can and does become involved in certain enforcement actions helps contribute to deterrence.
- Fostering Competition. The national government routinely monitors and reports on progress and success in individual states. Results in individual states can easily be compared. This has resulted in a healthy sense of competition among some states that has improved program success.
- Improved Program Effectiveness. Those closest to a problem are most likely to spot the problem and correct it in a timely manner. Shifting the primary responsibility for compliance monitoring and enforcement from the national to a more local level helps improve program effectiveness.
- Sharing the Financial Burden. Delegating to state and local governments also relieves the national government of substantial financial burden for enforcement programs.

Disadvantages

- Parallel authority may lead to duplication of effort and confusion of roles.

Clarifying Roles and Responsibilities

In the United States, implementing this partnership to most effectively use the limited resources of each government level has been a continual challenge. The U.S. EPA has interpreted the partnership differently at different times, and consequently varied its level of involvement. To stabilize the partnership, a special steering committee of about 30 federal and state representatives was established in 1984 to establish a policy for implementing joint state/national programs. The policy aims to create a state/national relationship that can ensure firm, fair, and effective enforcement that makes efficient use of scarce state and national resources. This policy clarified the U.S. EPA's role in overseeing state programs and in taking direct enforcement actions. The policy is implemented through annual agreements. Progress is reviewed regularly by the steering committee.

Oversight Role. The U.S. EPA now has clear criteria for evaluating performance of its own and state programs. Most programs must:

- Clearly identify the regulated community and establish priorities for enforcement.
- Have clear enforceable requirements.
- Monitor compliance accurately and reliably.
- Maintain high or improving rates of compliance.
- Respond in a timely and appropriate way to violations.
- Use penalties and other sanctions appropriately to create deterrence.
- Maintain accurate records and provide accurate reports.
- Have sound overall program management.

The U.S. EPA reviews state performance on a regular basis. It uses these criteria to identify areas at the state or local level where programs are not performing adequately. Program evaluation takes into account specific conditions in each state. The policy framework suggests action the U.S. EPA can take to improve performance. These actions include information exchange, technical assistance, and additional grant funds. In rare instances, state program approval may be withdrawn or the U.S. EPA may take direct federal enforcement action, as described below, where the state response has not been adequate. The U.S. EPA also identifies and publicizes information about successful state programs so that other state programs can learn from their approach.

Direct Federal Enforcement. The U.S. EPA has established clear criteria for when and how it will become directly involved in enforcement. The U.S. EPA will consider becoming involved only if at least one of these conditions applies:

- A state requests U.S. EPA involvement.
- The state action is not timely and appropriate.
- The case would set a national legal or program precedent.
- A U.S. EPA or federal court order has been violated.

If one of those four conditions does apply, the U.S. EPA may consider these additional factors when deciding whether or not to become involved:

- The case is nationally significant (e.g., involves a significant noncomplier, or affects national priorities).
- The violation significantly threatens public health or environmental quality.
- The violator is gaining significant economic benefit.
- The case affects other states.
- The case involves a repeat violator.
- State authority is inadequate.

The policy dictates that if the U.S. EPA does become involved, it should do so with maximum respect for the state program and its public image. For example, the U.S. EPA usually provides advance notice and consults with the state before it takes any action. Consultation allows the two levels of government to determine how the U.S. EPA can best complement state activities. The U.S. EPA may offer to take joint action with the state, use state data and witnesses, involve the states in developing and/or settling the case, issue joint press releases, share credit with the state, continually

inform states about what actions are being taken and why, and occasionally consider withdrawing if state action seems sufficient to achieve the enforcement goal.

The biggest area of conflict remains differing state and U.S. EPA views on the schedule and severity of response actions. Historically, states have preferred informal responses because of their lower cost and have been reluctant to impose significant monetary penalties. Recently, however, this gap has been closing. The U.S. EPA encourages, and is actively considering requiring, states to impose monetary penalties that at least recover the benefit of noncompliance.

Whether the U.S. EPA actually becomes involved depends, in part, on whether the state is taking sufficient enforcement action on its own. EPA's willingness to use its own authority for direct enforcement is perhaps the most important leverage it has with state programs.

The Netherlands' Experience: Divided Responsibilities

In the Netherlands, environmental quality is regulated primarily through a licensing system authorized under various environmental laws. Responsibilities for licensing and enforcement are divided among the three levels of government: national (or central), provincial, and municipal. The national government is responsible for nuclear power stations and processors of chemical waste. Provinces are responsible for licensing large industries such as chemical and power plants that are major pollution sources. The remaining regulated firms, which comprise the vast majority of the regulated community, are the responsibility of the approximately 650 municipalities in the Netherlands.

Until recently, the municipalities were required to issue so many licenses relative to their resources that they fell far behind in licensing and even further behind in compliance monitoring. In the past few years, these three levels of government have worked cooperatively to review their enforcement programs and design and implement changes to improve their effectiveness. The national government provided several "start-up" resources, in the form of funding, training, and specialized expertise, to help provinces and municipalities design more effective programs. The three government levels also clarified their roles and responsibilities, and developed ways to encourage cooperation and sharing of resources among municipalities. The ultimate goal is to transfer as much of the implementation responsibility as possible to the intermunicipal associations. This partnership model is relatively new (as of 1990) and will continue to be developed over time.

The Public Nuisance Act

The Public Nuisance Act, originally passed in 1875, required municipalities to license almost any activity (e.g., a fire hydrant booster) that could have an environmental impact. The licensing burden was so great that municipalities were unable to meet it. A 1977 survey showed that over two-thirds of regulated firms did not have the necessary licenses, and that municipalities generally conducted inspections only when they had received a serious complaint from the public. Consequently, many forms of pollution went undetected. To solve this problem, the Netherlands amended the Act to reduce the administrative burden to municipalities. Now, simpler operations, such as bakeries, garages, and dry cleaning establishments, are governed by general regulations at the central level. These operations need only notify the municipal authority before beginning an activity governed by the regulations.

To encourage enforcement, the central government provided funds in the early 1980s to municipalities to develop an environmental compliance strategy, which was called a "Public Nuisance Act Implementation Plan." Municipalities receiving funding were asked to identify the regulated communities, develop priorities for licensing, and determine the organizational changes necessary to ensure that the municipality could achieve an acceptable level of compliance. About 90% of the municipalities established a program, although some did not implement it.

Chemical Waste Act

The Chemical Waste Act requires firms that generate chemical wastes to surrender their wastes to collectors and processors licensed by the national authorities. In the early 1980s, there were

major compliance problems. Many waste generators avoided compliance by mixing chemical waste with nontoxic waste, discharging chemical waste down sewers, or simply discharging it onto the ground.

In 1984, the central government launched a stricter enforcement program by enlisting the support of municipalities. The national authorities retained responsibility for monitoring the activities of the collecting and processing firms. Municipalities became responsible for monitoring compliance of the more than 200,000 firms in the Netherlands that generate chemical waste. The central authorities provided substantial support to municipalities to develop an effective enforcement program. They financed inspection projects at the municipal level. Municipalities were encouraged to cooperate with one another when conducting inspections. The central government also developed a program to train municipal inspectors in enforcement of criminal law, report writing, and social skills. Inspections were performed on a sector-by-sector basis, so that all firms of a particular type within a particular area were checked during each round of inspection. The central government also developed educational materials about the regulatory requirements that were distributed to the regulated community during the inspections. Some 80% of regulated firms were found to be unaware of their legal responsibilities.

Involving the Local Police

The national authorities debated whether to set up a separate environmental police force. They decided instead to enlist the support of the local police who patrol the local environment 24 hours a day and are well-versed in criminal enforcement. With national funds, the local police have been trained in environmental enforcement, and provided with sampling equipment, with the technical support of environmental specialists, and with subsidies to perform inspections. They work in close cooperation with the local environmental authorities, and have formed special regions that have expertise in environmental crime. This has resulted in a substantial increase in environmental prosecutions. As of 1990, this new role for the police is still evolving.

Encouraging Cooperation

To evaluate the effectiveness of the new chemical waste enforcement program, the central government sponsored workshops in five parts of the Netherlands. These workshops brought together the many different types of individuals involved in environmental programs: administrators of municipalities and provinces, police administrators, public prosecutors, public health officials, and civil servants. The purpose of the workshops was to exchange experience, discuss strategies, and identify problems.

The most serious problem identified was the lack of financial resources needed to maintain a sufficient permanent staff. In the Netherlands, the municipal environmental programs are funded by the national government. An independent study confirmed that municipal environmental budgets were deficient. To solve this problem, the central government increased the funds for municipal environmental programs, and worked with the Union of Netherlands Municipalities to encourage intermunicipal cooperation so that these resources can be shared to achieve high compliance levels.

Municipalities are now directly accountable to the municipal councils and the Inspectorate for Environmental Protection. All municipalities with fewer than 70,000 residents must cooperate if they want to receive increased financing. Larger municipalities are free to use the funding to improve their own programs, but receive an additional 25% if they cooperate with other municipalities. When applying for the subsidy, municipalities must demonstrate how they will achieve the required licensing and enforcement standards by 1995. Municipalities must submit an annual report to the municipal council on the progress and status of the enforcement program. The Regional Inspector for Environmental Protection, an official of the central government, must comment on the subsidy application and the draft annual report.

Clarifying Roles

Under the new enforcement program, the central government remains responsible for setting priorities in consultation with the provincial and municipal levels. These priorities influence program planning at the provincial and municipal levels. Each municipality retains administrative responsibility for any corrective action taken against violators. Municipal officials involved in the program (alderman, public prosecutor, police administrator, and administrators of the water control and purification boards, etc.) are required to meet periodically to set priorities, develop plans, share experience, and monitor various activities.

Industry Support

The Netherlands is also trying to enlist the support of industry by promoting environmental auditing (see Chapter 5). The central government is implementing pilot projects to introduce the concept and exploring the idea of providing environmental advisors that will assist firms in setting up their own self-care systems. It is encouraging industry to form regional agencies that could provide auditing assistance upon request. The government is working to create a new professional ethic in industry: that violating environmental regulations is inconsistent with the professional code of conduct that well-managed firms are expected to obey.

ROLE OF OTHER GOVERNMENT INSTITUTIONS

Several government institutions can have significant impact on the design and operation of enforcement programs. Most significant are the legislative (lawmaking), executive (management and budget), and judicial (legal) institutions, as well as any agencies that have programs in areas related to the environment. The particular institutions and the nature of their impact will depend on the governmental infrastructure of each country. Institutions with an impact will be those that:

- Identify the need for legislation.
- Create environmental laws.
- Determine budgets.
- Track program progress and success.
- Bring legal action.
- Oversee activities related to environmental management.
- Identify violators of the laws.

Legislative Institutions

The legislative institutions probably have the greatest impact on program development. They create the laws that define the environmental goals to be met, the authority and flexibility to meet those goals, and the level of funding. Legislative institutions can become involved in policy and implementation decisions by issuing amendments to laws that impose certain duties on the executive institutions. The legislative institution can impose deadlines that executive institution must meet.

Executive Institutions

The executive institutions are often responsible for identifying the need for legislation and for enforcing the legislation once it has been enacted. The executive institution is usually the environmental agency of the country or region. This agency may have its own administrative law judges. They provide an internal mechanism for enforcing administrative orders and appealing agency actions.

An executive institution may also supply the lawyers responsible for taking legal action against violators. If this institution is not the environmental agency itself, an interagency agreement can be important to define the conditions for services between the two executive institutions. U.S. programs often experienced difficulty in getting sufficient attorney time and cooperation to prosecute good

cases. These difficulties were largely overcome by involving attorneys early in the development of compliance strategies and by planning for individual cases.

Judicial Institutions

In some countries (e.g., the United States) judicial institutions are responsible for interpreting the laws. They may also impose requirements on the executive institution, for example, by requiring that it use certain rulemaking procedures if it wants those rules to be upheld in court. Courts may provide a forum for taking enforcement action, for prosecution, and for enforcing administrative orders (if the court is so authorized). Courts can also play a significant role in assessing sanctions.

Agencies with Jurisdiction in Areas Related to Environmental Management

Many government agencies may have authority in areas that affect or will be affected by environmental management. These include:

- Health-related agencies responsible for food safety, occupational health and safety, consumer products, pesticide use, etc.
- Natural resource management agencies, responsible for water, energy, minerals, forests, etc. Development of these resources can significantly effect pollution abatement.
- Land use planning agencies, responsible for community development, industrial siting, transportation, etc.
- Agencies that regulate industry and commerce.
- Agricultural agencies.
- Criminal investigation and enforcement agencies.
- Customs. (For example, in the Netherlands, the Customs Department is helping the Environmental Inspectorate by watching for and taking samples from imported materials that may violate a Dutch law prohibiting use of cadmium as a pigment or stabilizing agent in plastic. Further investigation is carried out by the Inspectorate.) Similarly, in the United States, agreements between the U.S. EPA and the U.S. Customs Service enhance enforcement of import and export requirements.

Competition or conflict between two government agencies because of overlapping authorities can dilute the impact of both programs. Conversely, constructive cooperation can strengthen both programs through increased efficiency and by identifying gaps in regulatory programs. Approaches to achieving integration among related agencies include:

- Integrating the responsible departments into one unit.
- Developing interagency agreements and memorandums of understanding that establish clear mechanisms and procedures for handling areas of overlapping authority and/or mutual interest.
- Ad hoc joint efforts such as joint research programs.
- Formal review of each agency's proposals by the other.
- Review of proposals by reference.
- Establishing special councils that are independent of each agency.
- Establish an independent government entity or commission.

Police

Local police and other government personnel involved in identifying and apprehending criminals can be a valuable resource for detecting violations of environmental laws. In the Netherlands, the local police are serving as the inspection and enforcement arm of enforcement programs. To serve in this role, the police must be appropriately trained, provided with the necessary sampling equipment, and have the technical support of environmental specialists as needed. The Netherlands has set up regional police centers that specialize in environmental crime, and has provided subsidies to the police for inspection projects. The police are responsible for surveillance and, in the case of simple environmental crimes, investigation. They also play an important role in

containing and fighting more serious environmental crimes, including organized environmental crime. Use of local police as inspectors has been very successful: the number of prosecutions has increased substantially in recent years, and the public image of the police has substantially improved.

In the United States, the Federal Bureau of Investigation (FBI), a national government agency for criminal investigation and enforcement, assists the U.S. Environmental Protection Agency in investigating and apprehending environmental criminals. The FBI and the U.S. EPA also provide joint training programs.

ROLE OF NONGOVERNMENT GROUPS

Several private organizations can have a critical influence on program success and efficiency. As described in Chapter 7, these groups may directly or indirectly influence enforcement. These groups can be valuable allies in efforts to improve environmental quality. Government enforcement programs will benefit by working with these groups wherever possible and appropriate.

Industry Associations

Industry or trade associations track and publicize developments that may affect their members. They may try to influence environmental legislation or programs as they are being developed. They may also serve as valuable channels for disseminating information on requirements, methods of complying, and compliance activities. Their dissemination channels include newsletters, journals, databases, and conferences. Associations of firms that make pollution monitoring equipment or control devices have strong economic incentives to disseminate information about environmental requirements.

Associations of Government Officials

These associations are nongovernment entities that provide a forum for government officials (e.g., mayors, governors) to work together in solving issues of mutual concern. Like industry associations, these groups track and publicize developments that may affect their members. These associations provide a resource for disseminating information and a forum for comment and recommendations concerning environmental management programs.

Professional and Technical Societies

Specialized professionals advise both government officials and the regulated communities on compliance issues. Their societies therefore have a strong incentive to track and disseminate information on regulatory developments. They may also try to influence regulatory decisions and compliance strategies they disagree with. In the United States, some of these societies independently develop industry standards. Sometimes, the U.S. EPA has adopted their standards into compliance strategies.

Trade Unions and Workers' Councils

Enforcement programs can have substantial impact on workers. For example, workers are generally members of the local community and would benefit by the improved environmental quality that may result from enforcement actions. Conversely, enforcement actions that result in substantial process changes or shut down of an operation may result in some unemployment. Consequently, workers will have strong feelings and opinions in some enforcement situations. Most countries have associations or groups that represent the interests of workers. The participation of Workers' Councils or other groups that represent workers at a particular facility will be important to success of enforcement actions at that facility. Trade unions or other organizations that represent workers at a regional or national level may become involved in development of requirements and policy for enforcement. Individual workers may also report violations by their facilities to authorities.

Universities

Some universities are important centers for environmental professionals and may function much like the professional societies described above in supporting and influencing enforcement programs.

Insurance Companies

In many countries, private citizens can sue industry for personal injury or property damage caused by certain types of environmentally related activities. In theory, insurance companies that end up paying the cost of the suit should have an incentive to educate their clients about environmental requirements and assist them in compliance. These companies are therefore a potential ally for government agencies running enforcement programs.

Public Interest Groups

Citizens can play a major role in shaping and implementing environmental enforcement programs. With a stake in environmental quality, citizens may seek to influence environmental legislation and enforcement programs through lobbying efforts. Usually these efforts are coordinated by public interest groups. These groups may collect and publicize data on environmental quality and compliance levels in an effort to influence program priorities. If monitoring data collected by the program are made publicly available, these groups may track the data and, if the law allows, file citizen suits against the environmental agency for not doing its job, and/or against individual violators for violating the law.

Public interest groups also play an important role in disseminating information to regulated communities and to citizens who are concerned about environmental quality. Citizens may also play an important role as environmental watchdogs, spotting violations occurring on a local level that may escape notice by enforcement officials. Public interest groups can be an important means of enlisting citizen involvement.

Use of Independent Contractors to Supplement Government Personnel

Private firms may be able to provide more faster and cost-effective services than government agencies. Enforcement officials may therefore contract some of their responsibilities to private firms. One issue in using contractors is ensuring the quality of their work (see Chapter 10).

Private companies have proven to be a valuable resource for inspection in the Netherlands during personnel shortages and work backlogs. Clear agreements are made about how the activities are to be carried out and how violations will be reported and responded to. Any official action in response to a violation is taken by authorized government inspectors. This combined public/private approach has often been effective, and efficient, and can produce faster results than a solely public approach. Dutch government officials have been careful to provide adequate, competent leadership and to clearly define the "private" inspectors' authority. This approach is also used in many U.S. programs.

Special Centers

National and regional enforcement programs may find it beneficial to establish regional centers that offer specialized services such as training and technical assistance to provincial or local programs. These centers can serve as a repository for specialized resources that might otherwise be unavailable to or unaffordable by more local programs. Such centers can also serve as a forum for exchange of information and ideas about effective programs, and can enhance cooperation and communication among different programs. The United States, for example, has established a National Enforcement Investigations Center (NEIC) in Denver, Colorado, that serves as a technical resource and investigative unit for developing legal cases against violators. It maintains a staff of trained investigators that are available to participate in enforcement actions anywhere in the country.

These investigators are skilled in a broad range of technical areas, such as groundwater monitoring and hazardous waste sampling.

9. EVALUATING PROGRAM SUCCESS AND ESTABLISHING ACCOUNTABILITY

INTRODUCTION

Information can be a powerful and vital tool for successfully implementing an enforcement program. Information about program activities and results can ensure that individuals responsible for pursuing enforcement are, in fact, doing so consistently and fairly using established procedures and strategies. Information can help managers adjust enforcement programs to changing conditions and lessons learned as the program is implemented. Periodic program evaluations to gather information about program activities and results serve many purposes:

- Evaluating Program Strategy. Evaluation helps program managers determine whether the strategies they are using to achieve compliance are working. Results of evaluations are used as a basis for identifying problem areas and making changes to improve effectiveness.
- Internal Accountability. Periodic evaluations of success provide a basis for establishing a system to hold program personnel accountable for the implementation and effectiveness of the program. Establishing an accountability system involves defining performance goals and/or measures, obtaining commitments from program personnel to achieve those goals/measures, and evaluating their performance against those goals/measures. Where necessary, action is taken to improve performance. Accountability is valuable to ensure the quality of the program at all levels, from entry-level personnel to senior management.
- Creating Deterrence. Periodic reporting of program activities and successes to the regulated community contributes to deterrence by raising awareness that there is a good chance violations will be identified and responded to. Such reporting will be effective only if the program has been active and successful.
- Public Accountability. In some countries, enforcement programs may be required by law to report their progress and achievements to the public. Program evaluation provides the basis for public accountability. This accountability can be an important force in shaping program strategies and priorities. The U.S. enforcement program, for example, is continually scrutinized by the members of the U.S. Congress, who were elected by the public. Members of Congress may request hearings and reports to learn about program activities. Members of the public may contact their Congressional representatives at any time to express satisfaction or dissatisfaction with a program.

This chapter discusses issues in and approaches to evaluating program success.

ISSUES IN MEASURING SUCCESS

Measuring the success of a enforcement program is not easy. In the United States, there is a continuing debate about how success should be measured. Many parameters can be used to evaluate program effectiveness. Some measure results, such as improvement in environmental quality and rates of compliance. Some measure activity levels such as inspections and enforcement actions that contribute to deterrence. Others provide qualitative assessments of program performance and direction. Program measures include (see also Figure 9-1):

- Environmental results.
- Compliance rates.
- Progress in returning significant violators to compliance.
- Measures of compliance monitoring.
- Number of enforcement responses.
- Timeliness of enforcement responses.
- Monetary penalties assessed.
- Measures of technical assistance.

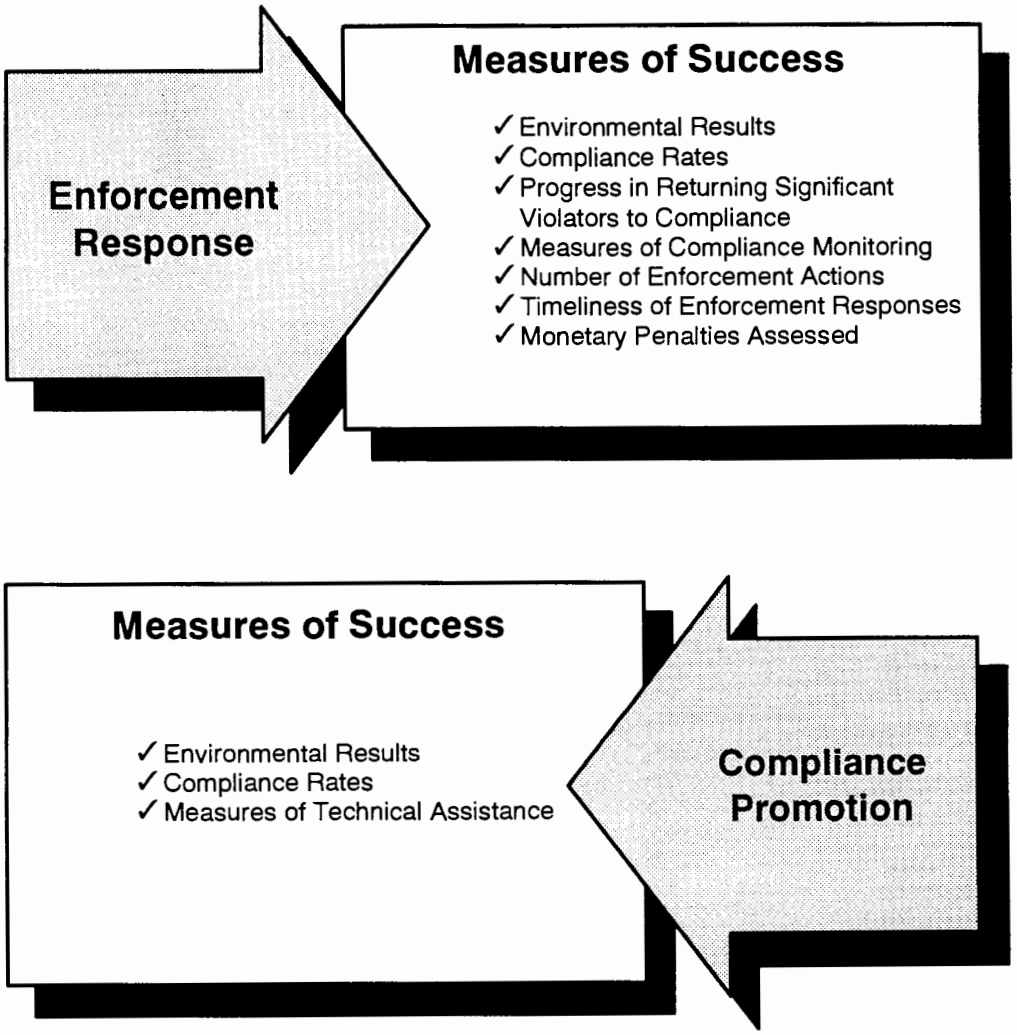

Figure 9-1. Measures of Success in Compliance Promotion and Enforcement Response

Each of these measures (discussed below) has advantages and disadvantages. Several measures must be used to gain a meaningful assessment of program effectiveness. Key questions to ask when considering which measures to use include:

- How accurate is the measure?
- What resources are needed to obtain the necessary data?
- How frequently should data be collected?
- Who will collect the data?
- How should the data be reported, and to whom?
- Who will analyze the data? What will they analyze for?
- Where will the data be stored?
- Will the data be computerized?

Collecting and processing reliable information on compliance and enforcement can be a constant challenge. For example, all personnel involved in gathering or analyzing data need to clearly understand exactly what data should be reported. Problems can arise if different individuals within a program have different interpretations of what data are needed.

Another challenge is that different levels of an enforcement program may have different data needs. Local personnel, for example, may prefer to focus their resources on data they consider valuable for evaluating program performance. Program personnel at a national level may have different priorities. National data systems will benefit if they are designed from the bottom up. Since local personnel collect the data, they will have a greater incentive to gather accurate data if they believe the data will be useful to them.

Mechanisms will be needed to gather and store the data, and to transfer it at appropriate intervals to other program levels that will analyze the data. A schedule for issuing reports of the analysis will also be needed. Policymakers may also wish to conduct special studies to analyze program strategy and success, and recommend improvements. These studies could examine issues such as:

- The effectiveness of various program policies, e.g., which promotional vehicles were successful in reaching the regulated community, the policy for identifying and screening violators.
- The effectiveness of various enforcement techniques.

Such analysis would be useful when reviewing and refining program priorities and strategies.

MEASURES OF SUCCESS

Success can be measured in two basic ways. One way involves setting goals or targets (for example: a certain number of inspections should be conducted each year), and then comparing actual activity to the goal. The second way involves tracking results, i.e., looking for trends and changes in activities or results over time (for example, a finding that 25% more inspections were conducted this year than last year may indicate an improvement in this activity). Tracking can either be routine (e.g., annually) or periodic. Tracking can be applied to any of the success measures described below. The goal-setting approach works only when realistic goals can be set; this is possible and appropriate for only some of these measures, as described below.

Environmental Results

Improved environmental quality is the ultimate goal of any environmental program and therefore is the most desirable measure of success. The types of environmental results that can be measured include overall environmental quality, reduction in pollutant releases, and risk reduction. Unfortunately, these measures have several shortcomings:

- There can be a significant lag time between the compliance promotion and/or enforcement response activity and the resulting improvement in environmental quality.
- It is hard to link changes in environmental quality to specific sources or specific compliance actions.

- Other factors, such as changing weather patterns or economic conditions, may affect environmental quality and therefore the accuracy of this measure.
- Compliance with some environmental requirements does not result in measurable improvements in environmental quality.

Compliance Rates

Compliance rates are one of the best overall measures of enforcement success. High compliance rates are the ultimate goal of most U.S. programs. Nevertheless, this measure also has shortcomings:

- Compliance rates rely on the thoroughness and frequency of inspections and/or on the accuracy of self-reported data. Compliance rates will not be reliable if these data are not thorough or accurate enough.
- A lower compliance rate may mean that the program is doing a good job of detecting violations, that the program is using stringent standards for compliance, and/or that the regulatory requirements are stringent.
- A high compliance rate can be misleading if the most significant pollution sources remain out of compliance, or if sources in compliance fail to stay in compliance.

Because of these shortcomings, U.S. programs find it difficult to hold managers accountable for improvements in compliance rates. U.S. programs do, however, use compliance rates to suggest specific areas requiring management attention.

If compliance rates are used as a measure of success, policymakers will need to agree on what constitutes compliance. For example:

- Does compliance mean achieving the required emission levels or meeting a schedule for compliance set forth in an enforcement agreement?
- Should the compliance rate cover any and all requirements, no matter how minor, or just the most significant requirements?
- How should repeat violations be reported? For example, how should sources be reported that are in compliance during the reporting period, but which are known to regularly go in and out of compliance?
- What influence should the percentage of sources of unknown status have on the evaluation of compliance rates? For example, if a particular compliance rate is shown for 10% of facilities for which data exist, what assumptions are made about the other 90%?
- What data gathering is needed to ensure that facilities that are in compliance continue to stay in compliance?

Progress in Returning Significant Violators to Compliance

Significant violators are those violators that have the greatest impact on environmental quality. Bringing them into compliance will therefore have the greatest immediate impact on environmental quality. It may also have an important deterrent effect, since significant violators are often relatively large and well known sources within the regulated communities. This indicator is appropriate for both tracking and goal-setting. It is important to remember that this indicator does not provide any measure of success achieved in that portion of the regulated community that are not defined as "significant violators."

The U.S. has used this measure since the late 1970s. It is one of that country's most successful management tools. At first, the U.S. program officials identified the most significant pollution sources throughout the nation and proceeded to take action against them. This effort brought many large industries into compliance. However, enforcement activity declined rapidly when this initial list was exhausted.

In 1985, the U.S. adopted a new system that does not single out particular industries. Policymakers developed national criteria for what constitutes a significant violator. They also defined what actions should be taken for particular types of violations. Program officials must identify

significant violators in their jurisdiction, and make commitments to taking specific actions against a certain number of significant violators every 3 months. Sources are tracked until full compliance is achieved. Records are kept of the number of significant violators identified, the number and type of actions taken, and the results of those actions. Performance is evaluated based on how closely these goals are met. The lists of significant violators are made publicly available.

This approach has several advantages:

- It tracks not only actions taken, but results achieved. Actions and results can be easily associated.
- The system encourages actions that will have significant environmental benefits.
- Enforcement program managers can analyze the data for patterns of compliance across industry, companies, and environmental media.
- Publicizing the lists of significant violators may encourage other sources to achieve and maintain compliance.

Measures of Compliance Monitoring

Another measure of success, appropriate for both tracking and goal-setting, is how well an enforcement program monitors compliance. Several measures can track progress in this area:

- The number of inspections.
- The quality of inspections.
- The appropriateness of the targets of inspection.
- The quantity of self-reported data received.
- The quality of self-reported data received.

The number of inspections is probably the easiest of these indicators to track. This indicator provides a qualitative measure of program success in creating an enforcement presence.

The United States uses these indicators in its enforcement programs. Program officials set goals for and report on the number of inspections. Policymakers develop national criteria for effective inspection strategies, and program officials evaluate the strategies against these criteria. The United States also conducts oversight inspections to assess the quality of program inspections. Oversight inspections are conducted by program inspectors or consultants either separately or simultaneously with local inspectors.

One issue in measuring compliance monitoring is that well-targeted, high quality inspections will probably increase the number of violations detected and thus lower the compliance rate.

Number of Enforcement Responses

Legal action is the ultimate weapon in the arsenal of environmental enforcement tools. Measures of enforcement responses may therefore be of particular interest to members of the public and nongovernment organizations that are concerned about environmental quality. In the United States, for example, this measure is viewed by the public and by the U.S. lawmakers as an indication of program managers' commitment to gain compliance, and it is therefore closely tracked.

Despite its potential importance in public relations, this indicator has important disadvantages:

- The fact that an enforcement action has been initiated does not mean that compliance will be achieved in a timely and effective manner. The litigation process can result in lengthy delayed compliance schedules.
- Legal action is the most costly enforcement response. An emphasis on legal action may divert attention and resources from other important program activities essential to program success. This may be a particular concern if the regulated sources are small and numerous.
- The number of enforcement responses may depend, in part, on the degree of noncompliance. For example, it may be easier to bring successful enforcement action in the early stages of a program when there are many obvious violators, than at later stages when (if the program has been successful) violations are less dramatic and less obvious.

To use this indicator, policymakers must decide exactly what will be counted: total number of legal cases initiated; a breakdown of the types of cases by severity of violation, number of sites involved, multiple violations, or repeat violators; the number of cases won, etc. These indicators are *not* appropriate for goal-setting, because making program managers responsible for meeting quotas for enforcement response could undermine the objectivity of the program in evaluating whether or not sources are in compliance.

Timeliness of Enforcement Responses

One of the best indicators of a program's efficiency is the time it takes to either (1) respond to a violation, or (2) achieve compliance. Ideally, many types of enforcement responses should be as swift as possible so that the source can be returned to compliance as quickly as possible. Timeliness can be evaluated by monitoring trends and, sometimes, by comparing actual results against predetermined goals. For example, monitoring trends is particularly appropriate for measuring time to achieve compliance, since so many factors influence this result. Timeliness can also be measured by setting goals for different types of enforcement actions. Success is then measured by comparing the actual schedules with these timeliness goals. Goals can only be set for those types of enforcement actions that consistently take a predictable time to complete. These are usually the earlier and more routine enforcement actions. Enforcement actions involving later stages of legal procedures are generally too unpredictable to be evaluated in this way. Also, timely response may not be possible or appropriate in some cases, such as criminal cases, that required detailed investigation before an enforcement action is filed. Care may be necessary to ensure that use of timeliness as a measure of program success does not encourage enforcement personnel to take simple administrative action rather than pursuing a more time-consuming enforcement response.

Monetary Penalties Assessed

This indicator is simply the total number and/or value of penalties assessed as a result of enforcement actions. Trends in this indicator are used to measure success, since it is not possible or appropriate to set goals for how many penalties should be assessed during a particular time period or how severe the penalties should be. This indicator may not be a good means of holding managers accountable for successful enforcement activity because there is generally a significant lag time (sometimes years) between the initiation of an enforcement action and assessment of a monetary penalty.

In the United States, reports of the total value of monetary penalties assessed for environmental violations are prepared annually.

Measures of Technical Assistance

One measure of success for programs with an emphasis on compliance promotion is the extent and effectiveness of technical assistance provided by the program to the regulated community (see Chapter 5). This success measure is appropriate for both tracking and goal-setting. Several measures can track progress in this area:

- The number of facilities that have received technical assistance.
- The increased compliance achieved by facilities receiving technical assistance.

Other Measures

The search for useful measures of enforcement success is an ongoing and creative process. Other measures in addition to those described above may prove useful, such as the rate of recidivism (i.e., Do those subject to enforcement response maintain or improve compliance in the future?) and

timeliness of the return to compliance once a violation has been detected (i.e., How quickly is compliance achieved?).

PART III: IMPLEMENTATION AND EXPERIENCE

10. BUILDING AN EFFECTIVE ENFORCEMENT PROGRAM

This chapter discusses issues involved in building and managing enforcement programs. While program structure and resources depend greatly on the roles, responsibilities, and types of authorities available and appropriate in each situation, some steps and decisions are common to the development of most programs.

PERSONNEL

Role of Program Personnel

Usually enforcement programs draw upon a mix of skills and expertise, including engineering, scientific, legal, and administrative. These individuals will need to work together effectively to identify and respond to violations.

One key decision in assigning roles to program personnel is the degree to which inspectors will become involved in following up on violations they have detected. In some programs, inspectors focus on inspections, while other technical and legal staff are responsible for taking action against violators. In other programs, inspectors play a major role in enforcement response.

Clearly defining the roles of the individuals involved in enforcement provides a basis for efficiency and cooperation. In many countries, technical and legal personnel work hand in hand to develop enforcement cases. Table 10-1 shows some of the responsibilities typically undertaken by technical and legal staff as they work to identify a violator and develop a case.

Staffing Level

Ideally, an enforcement program will have sufficient staff to meet program objectives. In reality, program objectives may be based, in part, on the staffing level that can be achieved with available program resources. Thus, staffing and program strategies are often interrelated.

The program strategy will define the frequency of inspections and the amount of personnel time required to conduct them. Inspection time includes time for the inspection itself, as well as time to plan the inspection and follow it up with written reports and other actions. The time required before and after the inspection may be twice as long as the inspection itself.

Policymakers will also need to ensure a balance of staffing among the various program functions, to avoid creating bottlenecks due to inadequate staff in a particular area. For example, too much emphasis on identifying violations could mean that many identified violations are not addressed and, as a result, the program loses credibility and operates inefficiently.

Training

Developing the breadth and depth of expertise needed to run a enforcement program is challenging. There are no easy answers to obtaining the right skill mix. Enforcement is such a highly specialized area that some training must occur on the job, either formally, through training programs, or informally, e.g., by pairing a new employee with a more experienced employee performing the same function.

Integrated training (i.e., training designed to develop basic skills in a variety of expertise areas) is valuable to develop the interdisciplinary skills essential to enforcement, and also to build team spirit and a basis of mutual understanding and knowledge essential for future cooperation. The U.S. Environmental Protection Agency, for example, is developing a national training institute that could provide an integrated training opportunity for inspectors, lawyers, and other program staff at all levels of government.

TABLE 10-1. TYPICAL RESPONSIBILITIES OF TECHNICAL AND LEGAL STAFF IN ENVIRONMENTAL ENFORCEMENT

Stage in Enforcement Response	Typical Technical Staff Responsibilities	Typical Legal Staff Responsibilities	Joint Responsibilities
1. Determine whether facility is in compliance.	Gather information about the nature and cause of the violation, and what the violator could have done to prevent it.	Obtain access to facility via search warrant.	
2. Determine enforcement response to a violation.	Assess seriousness of violation. Prepare formal response.	Assess whether the source has violated the law. Determine what legal action is possible. Review formal response.	Determine enforcement action.
3. Attempt to negotiate settlement out of court.			Negotiate settlement with violating facility.
4. Develop a civil or criminal case.			Discuss and gather evidence needed for a civil or criminal action. Negotiate with facility. Prepare for hearings.
5. Present the case in court.	Appear in court to defend technical judgments about a case.	Appear in court to present and argue the case.	

Environmental requirements are changing and complex. Specialized training is often also needed to build a depth of expertise in various program areas and to retrain staff as requirements change or as program strategy is modified.

Fairness and equity are important elements of an effective enforcement program. Training program staff in professional standards of conduct provides an important basis for program credibility.

Use of Third Parties

Some enforcement programs use contractors or other third parties to perform certain program functions, e.g., inspections. Third parties can be particularly useful:

- To compensate for shortages of government personnel.
- To ensure adequate staffing during stages of a program (e.g., the first round of inspections) that require more personnel than usual.
- To work through backlogs.
- To provide specialized expertise that is not readily available within the government agency.

Use of third parties raises several issues:

- Qualifications. There may need to be some means to ensure that these third parties are suitably qualified and knowledgeable to perform inspections using the procedures established by the program. For example, third parties can be required to complete a particular training course, or to acquire a particular type of certification.
- Confidentiality. Information acquired during an inspection is generally confidential. Some mechanism will be needed to ensure that the information gathered by third parties remains confidential.
- Fairness and Consistency. Information gathered during an inspection forms the basis for a decision that a violation has occurred and an enforcement action should be taken. Use of third party inspectors may raise concerns about whether decisions made based on the results of third party inspections are consistent with decisions made based on information gathered by program inspectors.

INFORMATION MANAGEMENT SYSTEMS

As discussed in earlier chapters, information on the regulated community, on violations, and on program activities is important to program management. Such information is used to develop priorities and strategies to most effectively use program resources (Chapter 4); to monitor compliance (Chapter 6); to evaluate progress in meeting program objectives (Chapter 9).

An enforcement program will benefit by having some system for information management. Systems vary in different environmental programs and different countries, depending on the amount of information to be managed and on the resources available for management. Where possible, computerized systems are valuable because they allow rapid and sophisticated information storage, retrieval, and analysis.

Regardless of the kind of system, information management planning is important to program effectiveness. Basic issues to address in planning include:

- What information should be obtained?
- Who is responsible for obtaining it?
- Who is responsible for recording it?
- How long should the information be maintained in the files?
- What types of information analysis will be performed?
- Who will perform these analyses and how frequently?

- What, if any, information is confidential?
- What, if any, information should be released to the public?

In the Netherlands, the government has embarked on a two-year program to inventory the compliance status of the 900 companies that hold permits for processing hazardous waste. Inspectors complete a checklist for each company and transmit the results to a central computer. The information system is set up to generate sector-specific reports on compliance behavior, permit quality, and environmental impacts. The inspectors have received intensive training, supported by written materials, about how to obtain, record, and transmit data. The results are being used to support policy development for hazardous waste processing.

PROGRAM FUNDING

Funding is clearly an important issue in establishing an enforcement program. Enforcement programs in different countries use a variety of funding sources. These include:

- General Revenues. Many countries fund environmental programs, including enforcement programs, by allocating funds from general revenues, e.g., income or sales taxes on industry and/or private citizens.
- Pollution Taxes or Fees. Enforcement programs can be funded by taxes levied on or fees charged to facilities based on the amount and/or toxicity of their pollution.
- Inspection Charge. Some programs obtain income by charging facilities for inspections. This is the approach taken in Sweden.
- Permit or License Charge. Program income can be obtained by charging facilities for obtaining a permit or license.
- Monetary Penalties. Policymakers will need to decide what will be done with monetary penalties collected under the program. These can either be deposited in a general government or environmental program fund, or used directly to pay for enforcement program expenses. Using monetary penalties to pay program expenses is an approach widely used by states in the United States but not as yet by the national government. One concern with this funding source is that it may cause the program to lose credibility if it appears that enforcement actions are being taken to increase revenue. If the program is funded through penalties, certain processes must be defined in regulations and procedures to ensure equity, i.e., that the program penalty does not specifically target facilities for enforcement because of the potential penalty revenue.

EVOLUTION OF ENFORCEMENT PROGRAMS

All enforcement programs evolve over time. This section gives examples of how some established programs have evolved. These examples are not intended as models for evolution. Rather they demonstrate that enforcement can be successful in the early stages of program development. They also illustrate how enforcement programs do typically pass through many different stages in evolution in response to lessons learned and changing conditions.

Enforcement as a Priority

The priority given to enforcement by the government is an important factor contributing to the success of an environmental program. Both the United States and the Netherlands have experienced periods where enforcement was not a priority and, consequently, the overall environmental goals were not being met effectively. In both cases, these deficiencies catalyzed a new emphasis on enforcement, with substantial improvements in environmental quality.

In the United States during the late 1970s, the U.S. Environmental Protection Agency conducted a major enforcement effort to bring the most significant violators into compliance. This effort was highly successful. After 1980, however, there was a precipitous decline in the number of federal civil suits and other enforcement activities due to a reorganization of the program and a widely shared perception that enforcement was no longer emphasized by senior Agency officials.

In a much-publicized turnaround, a new management team was brought to head the U.S. EPA in the early 1980s. Enforcement strategies were reconstructed in 1984, and enforcement was emphasized repeatedly by the new Administrator and his Deputy. However, this was not sufficient. So, a new management apparatus was put in place to revitalize the enforcement effort, and to systematize and restructure enforcement so that it would no longer be subject to the whims of management. The U.S. EPA now has well-defined strategies, measures, and systems to manage enforcement to an unprecedented degree. Enforcement continues to be a priority for the U.S. EPA. This management emphasis on enforcement has provided an important foundation for the program to evolve during the 1980s and early 1990s in response to the new challenges and changing conditions.

In the Netherlands, many environmental scandals involving hazardous waste came to light in the late 1970s and early 1980s. The nation's laws regarding hazardous waste were not being complied with because there was no enforcement program. To improve this situation, the Dutch government made enforcement a priority in 1984 by establishing an extensive Multiyear Intensification Program (MIP). The program's main objectives were:

- Significantly improve the quality of enforcement at the national level by improving the expertise and skills of MIP personnel, allocating more manpower and resources to enforcement, improving the internal organization of enforcement resources, and fostering cooperation among the different groups that would be involved in enforcement.
- Involve officials at the provincial and local levels by developing their skills and expertise, and by strengthening the Public Prosecutor, and increasing the availability of the police force for enforcement.
- Construct a network of cooperation among all the agencies involved.

The program was implemented over a 6-year period and was instrumental in stimulating enforcement at both the national and local levels. During this period, the national government also developed a total environmental program, the National Environmental Policy Plan. This Plan further strengthens enforcement by providing financial resources to the provinces and municipalities to enable them to bring their permitting and enforcement activities up to an adequate level over a 4-year period. Financial resources have also been made available to the Public Prosecutor and the police to enable them to devote more attention to enforcement (under criminal law) of environmental legislation.

Evolution of Authorities

Table 7-1 lists many authorities that may be of value to an enforcement program. Enforcement programs typically begin with a much smaller number of authorities. Additional authorities are added gradually by revising laws after the need for new authorities becomes apparent from unsuccessful efforts to address problems. New authorities are sometimes added based on creative interpretation of existing laws. Even the more mature programs such as those in the United States continue to add authorities as previously unnoticed gaps are discovered and as changes in environmental problems create a need for new authorities that were not previously needed.

In Canada, for example, criminal enforcement has been the predominant enforcement mechanism at the national level. Canadian laws have evolved to provide some very creative criminal enforcement sentencing conditions. However, Canadian officials are now actively considering the need for a complementary civil enforcement program. There is some discussion

about whether existing Canadian laws provide sufficient authority to develop a civil enforcement program.

Until recently in the United States, national enforcement programs were predominantly civil in nature, even though certain general authorities could have been used for criminal enforcement of environmental requirements (e.g., a general prohibition on defrauding the government). Over time, the amount of criminal enforcement has increased as criminal authorities have explicitly been strengthened in each of the U.S. environmental laws. New authorities also have been added so that monetary penalties can now be imposed administratively as well as through the courts in virtually all U.S. programs. Consequently, civil administrative programs have significantly increased in importance.

Several U.S. environmental programs began with insufficient authorities to accomplish their goals. For example, the first U.S. laws concerning hazardous waste did not provide authority to correct past environmental damage at ongoing hazardous waste operations. This authority was subsequently added. The original Clean Air Act did not provide the federal government with any authority to seek or impose monetary penalties. Consequently, program officials could only seek court-ordered compliance schedules. An authority to impose monetary penalties was added several years later.

Identifying the Regulated Community and Establishing Priorities

Enforcement programs with limited resources and information often begin by focussing on the few sources that are causing the most severe environmental or public health problems. In the United States, for example, national enforcement programs concentrated first on a relatively small group of major sources to ensure that basic pollution controls were in place. Early enforcement efforts also focussed on particular industries, such as the power and steel industries, so that enforcement officials could build expertise and precedents for these key pollution sources. Priorities became more sophisticated as the programs evolved. More recently, priorities are set based on goals of reducing environmental and health risk and creating deterrence. In U.S. programs, the need to strike a balance between establishing a broad enforcement presence in the regulated community and targeting the most serious violators has been handled differently at different times. Simple formulas, such as "inspect all major sources of air or water pollution at least once a year," are being replaced by more tailored approaches that are responsive to local priorities and needs.

Compliance Promotion

A fundamental issue in structuring an enforcement program is how much emphasis should be placed on compliance promotion versus enforcement. The resolution of this issue depends greatly on the culture and particular regulatory situation. The U.S. water discharge program provides one example where compliance promotion alone was not as successful at achieving compliance as compliance promotion combined with enforcement. Early efforts promoted compliance by providing municipalities with subsidies to construct sewage treatment systems in conformance with standards specified by law. Nevertheless, compliance rates were relatively low. Major results were achieved in a short time period once significant enforcement actions and accompanying monetary penalties were imposed (see last section of Chapter 7).

Compliance Monitoring

A major issue for enforcement programs is training inspectors. Many enforcement programs rely on-the-job training, with junior staff learning in the field from senior inspectors. For completely new programs, many inspectors learn by experience with each inspection. As experience is gained, inspection guidelines and checklists can be developed.

The development of reliable self-reporting and self-monitoring systems also takes time. This generally proceeds in several steps. For example, a first step can be to ensure that any equipment needed for self-monitoring is in fact installed and operating. A next step can be comparing results across sources to help target inspections. Another step is often development of a system to manage the information so that it can be more easily accessed and used by program personnel.

Enforcement Response

Policies for enforcement response evolve over time as experience is gained and new authorities are added. In the United States, some enforcement policies are tested before being made final. Some enforcement programs purposefully delay developing enforcement response and penalty policies until they have some experience with the actual types of violations that are emerging and with the best approaches for bringing sources into compliance.

Roles and Responsibilities

Several decisions will need to be made in structuring and implementing an enforcement program: the degree of centralization versus decentralization; the role of technical staff versus engineers; whether an enforcement program should cover several environmental media or focus on one medium. Whatever decisions are made, program responsibilities often shift as a program matures. For example, some centralized programs are eventually decentralized to take advantage of expanded resources at the local level. Also, it may be appropriate to decentralize when experience gained at the national level can be effectively transferred to the local level. Some decentralized programs are centralized when differences among decentralized programs cause problems in transboundary pollution or when some local programs may be limiting enforcement to attract industry to the area.

The role of legal staff may diminish as programs evolve and clear tested legal language and procedures have been developed and can be made routine. In the United States, for example, administrative enforcement of many routine violations can now be implemented with established policies and procedures and little attorney involvement.

Historically, U.S. federal enforcement programs have been structured along separate program lines. Now there is greater emphasis on multimedia enforcement. Many U.S. state programs, however, have always had multimedia programs. The United Nations Environment Programme strongly advocates a multimedia approach to inspection.

Evaluation and Accountability

Many enforcement programs rely on anecdotal information to evaluate success both internally and externally. Evaluating program success may not be a focus in new programs, particularly if resources are limited and there is no public demand for information on enforcement actions. U.S. enforcement programs now have a fairly complex system for accountability and evaluation. This system evolved over time in response to the need to effectively manage a decentralized program that retains centralized responsibility for oversight, and also because of the highly public nature of this oversight process. Also, as resources for enforcement have almost doubled from 14% of federal environmental personnel in the early 1980s to 25% in the early 1990s, more attention is being paid to how well those resources are achieving results.

11. CASE STUDIES: PULLING IT ALL TOGETHER

INTRODUCTION

This chapter shows five examples of how the enforcement principles and tools described in the previous chapters have been applied in real-life situations. Most of these case studies span several years and illustrate how programs evolve over time. In several cases, there was limited enforcement during the first years of managing an environmental problem. Enforcement became a higher priority when substantial noncompliance was documented. In all cases, enforcement was clearly effective in achieving significant increases in compliance and improvements in environmental quality. The case studies show a wide variety of creative solutions to challenging compliance problems.

- In the first case study, officials in Allegheny County, USA, developed several innovative settlement mechanisms to help ensure compliance with air pollution control requirements by facilities with financial limitations. This study also demonstrates how the ability to supplement local efforts with support from higher levels of government can provide the "muscle" needed to overcome challenging obstacles and clear the way for more effective subsequent enforcement at the local level. In addition, this study is a good example of how potentially adversial relationships in enforcement and dispute resolution can be transformed into resources for achieving success by creating forums for cooperation and dialogue among interested, affected, and concerned parties.
- The second case study concerns enforcement, at the local level, of particular waste disposal requirements in the Netherlands. It illustrates a creative approach that enabled Dutch officials to achieve results despite staff shortages and time constraints involved in the permitting process. The study also shows the importance of considering social and economic factors affecting compliance.
- The third case study describes an evolving program in the Netherlands for controlling disposal of liquid waste from ships. The program has achieved significant initial success but still faces many challenges.
- The fourth case study, from the USA, shows how national and state enforcement efforts succeeded in bringing local municipalities into compliance with wastewater treatment requirements. With support from the Administrator of the U.S. EPA, the states, the public, and the media, federal and state officials were able to create a strong and effective enforcement presence. A carefully thought-out policy and management approach guided the program from its inception. The program permanently altered the common attitude that it was too difficult for the federal and state governments to enforce against municipalities and that such enforcement would not result in environmental compliance.
- The fifth case study concerns enforcement of lead regulations in the United States. This example describes an enforcement program designed to achieve compliance with requirements of an economic incentives-based approach to reduce the lead content of gasoline. Enforcement seems to have had substantial deterrent power in this case.

As these five examples illustrate, every environmental management situation is unique and requires creative application of the many options described in this text to design an effective enforcement program capable of achieving the desired results. These five case studies demonstrate a range of possible approaches to enforcement, but are by no means inclusive. Many other approaches exist. As stated Chapter 1, policymakers must make their own choices within the parameters of the available resources and local cultural factors to develop an effective compliance strategy and enforcement program in any particular situation.

CASE STUDY 1: ENFORCEMENT OF AIR REGULATIONS IN ALLEGHENY COUNTY, USA[1]

Introduction

Allegheny County is located in the state of Pennsylvania and is home to the City of Pittsburgh (see Figure 11-1). Since the early nineteenth century, the County has been a major steel production center in the United States. Because of its industrial success, the area experienced some of the worst air pollution problems in the country. The County was one of the first areas in the country to try to improve air quality and has been in many ways a model for successful air pollution control. Control techniques and standards developed in the County have become models on the national level. Air quality has substantially improved and no annual standards for particulates or sulfur dioxide are now exceeded in the County. Violations of short-term standards are rare and are usually due to breakdown of control equipment. This improvement in air quality is due to strict controls and to a decrease in steel and coke production since the late 1970s. This case study reviews air pollution control in Allegheny County with a focus on the two decades from 1970 to 1990, a period of increased environmental concern and substantial economic change.

County Profile

Allegheny County, Pennsylvania, is located in the northeastern United States (Figure 11-1). The County is approximately 731 square miles (1,893 square kilometers) in area, with a population (in 1990) of just over 1.3 million (down from 1.6 million in 1970). Pittsburgh, located in the center of the County at the confluence of the Allegheny, Monongahela, and Ohio Rivers, is the County's largest city.

The County is located in the foothills of the Appalachian mountains. on a peneplain, i.e., an elevated area flattened by glaciers. Three rivers have carved large valleys into the plain: the Ohio River, the Allegheny River, and the Monongahela River. Weather systems often stall at the Appalachian mountains to the east of the County, creating periods of stagnation in the spring, fall, and sometimes the summer that last for several days. The area experiences about 170 to 200 inversions each year.

The area has been a major industrial center since the early 1800s. The primary industries have been steel, coke, and related industries. There are also a few chemical plants in the County. Coal was burned by residents until the early 1950s, when large gas lines were built to service the area, and by coal-fired power plants (most of which are no longer operating due to the age of some of the facilities and a decreased demand for power). Almost all homes and commercial operations are now gas-fired. Industrial plants are generally located in the river valleys, and residential sections at higher elevations. Of particular concern has been a 25-mile (40-kilometer) stretch of the Monongahela River valley beginning in Pittsburgh and ending at the County line. In the early 1970s, this section contained seven steel mills, including the world's largest coke plant.

The steel and coke industries were healthy until the late 1970s, when these industries began to decline throughout the United States due to the availability of steel substitutes and the import of coke. Production declined steadily in the late 1970s and early 1980s and has remained relatively constant since the early 1980s. In the early 1970s, the County had 28 coke batteries; in 1991, only 19 of these were still operating. The County had nine steel mills in the early 1970s; in 1991, only four remained in operation.

[1]This case study was prepared in conjunction with Charles J. Goetz, Enforcement Division Administrator, Allegheny County Bureau of Air Pollution.

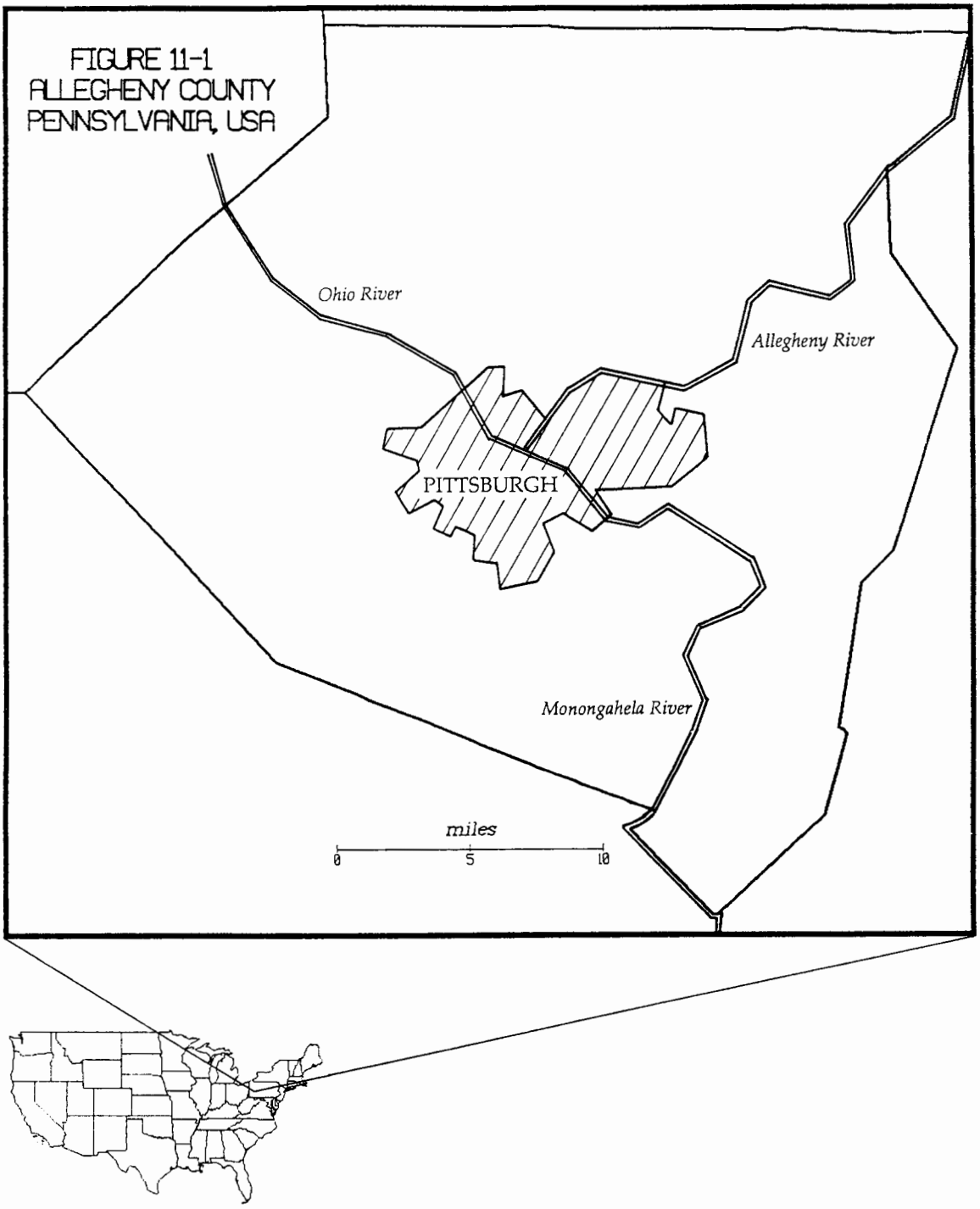
FIGURE 11-1
ALLEGHENY COUNTY
PENNSYLVANIA, USA
Ohio River
Allegheny River
PITTSBURGH
Monongahela River
miles
0
5
10

Air Pollution Control Before 1970

During the nineteenth century, as Allegheny County developed into a major industrial center, emissions from industrial and residential sources coupled with the area's frequent, stagnant inversions caused severe pollution problems. At that time, the City was described as "hell with its lid off." Even up to the 1940s, the pollution was sometimes so dense that street lights in Pittsburgh had to be turned on in the middle of the day.

The first efforts at air pollution control began in the late nineteenth century, but were ineffective until the late 1940s, when a 1941 Pittsburgh smoke control law was finally enforced. This ordinance regulated both industrial and residential combustion sources. One of the main thrusts of the law was a requirement that both industry and residences burn clean fuels. Similar pollution control measures were subsequently instituted in other parts of Allegheny County.

The Allegheny County Health Department took over the duties of the City Smoke Control Bureau in 1957 and assumed responsibility for air pollution control throughout the County. In 1960, the County passed Article XIII, which established a Bureau of Air Pollution Control under the Health Department and created some of the strongest particulate control regulations in the nation.

During the 1960s, residents and leaders in Allegheny County, as in other areas of the United States, became increasingly concerned about the state of the environment. The state of Pennsylvania authorized Allegheny County to regulate gaseous pollutants. The County passed a new and more encompassing regulation, Article XVII, in 1970.

Authority for Air Pollution Control, 1970-1991

On the national level, increasing citizen concern for the environment in the 1960s resulted in the creation in 1970 of the U.S. Environmental Protection Agency (U.S. EPA), the federal agency responsible for ensuring environmental quality. The 1970 national Clean Air Act required the U.S. EPA to establish health-related National Ambient Air Quality Standards, and it required each state to develop and enforce a State Implementation Plans (SIP) to meet these air quality goals.

Because of Allegheny County's long involvement in air pollution control, the state of Pennsylvania granted the County the authority to develop and implement the air pollution control program for the County. The County proposed a program that was approved by the state of Pennsylvania and subsequently by the U.S. EPA. With these approvals, the County program and regulations became part of Pennsylvania's SIP and are therefore enforceable by the county, state, and federal governments. This relationship has been in effect since 1972. The state and federal governments have become involved in enforcement only in situations where a state or national presence was important to achieve results.

Allegheny County Air Quality Regulations, 1970-1991

In Allegheny County, regulations are developed by the County Department of Health. They are submitted to the Air Pollution Advisory Committee (which includes representatives from industry, academia, city government, and the public—see below) for review and comment. The Board of Health then proposes final regulations to the County Commissioners who either approve or disapprove the regulations, but may not change them. Because of the County's responsibility as part of the SIP for Pennsylvania, County regulations must be approved by both state and federal governments.

During the period from 1970 to 1991, Allegheny County has enacted and amended air pollution control regulations several times, in response to changes in federal requirements and as a result of lessons learned through implementation and enforcement of the air pollution control program. Article XVIII was passed in 1972 in response to the 1970 national Clean Air Act, and amended several times in the next few years. Article XX was enacted in 1981 in response to the

1977 amendments to the national Clean Air Act. These regulations (and subsequent amendments) govern air pollution control in Allegheny County in 1991.

Following are some examples of how the County regulations have been changed to meet new federal requirements, to address newly discovered air pollution problems, and to improve the enforceability of the regulations:

- A mechanism was provided to allow industrial growth in areas that do not comply with air quality standards. The mechanism allows industrial growth in such areas under certain specified conditions but only if the emissions from the new source(s) are stringently controlled and there is a net improvement in air quality.
- Emission standards were established for hazardous air pollutants such as asbestos and mercury.
- Regulations were adopted to address newly recognized air pollution problems, such as emissions from the burning of waste-derived liquid fuels and emissions from abrasive blasting to remove old paint (often containing lead) from bridges, water tanks and other structures.
- Standards were established for particulate emissions from "nontraditional" sources such as roads, unpaved parking lots, and storage piles.
- Certain sources were required to install monitoring equipment to continuously measure emissions and report the results to the County.

The Air Pollution Control Advisory Committee

The Air Pollution Control Advisory Committee (APCAC) was established by Article XIII in 1960 to recommend changes to County air pollution control regulations and to advise the County Bureau of Air Pollution Control and the County Board of Health on air pollution control matters. The APCAC also provides a forum for citizen opinion about the performance of the Bureau of Air Pollution Control and a forum where the public can air their general concerns about air quality in the County. The APCAC is strictly advisory in nature. It consists of 19 persons, including representatives from academia, environmental and public interest groups, and industry. All members are appointed by the County Commissioners. Industry representation is limited to five members.

The Committee holds six to eight public meetings each year. The Committee reviews and comments on proposed new or revised regulations developed by the Bureau of Air Pollution Control. The Committee also reviews the County's portion of the Pennsylvania State Implementation Plan, proposed air monitoring programs, and other proposals connected with ensuring ambient air quality. The APCAC has provided an important mechanism for involvement of the various sectors concerned with and affected by air pollution control. The up-front involvement of these sectors in regulatory development has contributed to the success of subsequent enforcement efforts.

Standards and Methods

The County regulations established emission standards and specific methods for determining compliance. Both the nature of the standards and the specificity of the methods have provided an important basis for effective enforcement.

Two Types of Emissions Standards. The regulations provide two main types of standards: one type that is based on exact measurements of pollution (e.g., emission standards measured in pounds per hour) and a second type that provides a more general gauge of pollution (e.g., opacity of emissions). The first type is expensive and resource-intensive to measure, and often requires some days of analysis before results are obtained. Compliance with the second type can be readily determined (e.g., compliance with opacity can be determined by one inspector in about one hour's time). The second type of standard has provided County officials with an important and practical enforcement tool to help ensure compliance.

Specificity of Procedures and Methods. The County regulations define the procedures for inspection and measurement. This has helped ensure that regulated industries are treated fairly and that results are consistent (avoiding a situation, for example, where one method would find a facility out of compliance while a different method would find that same facility to be in compliance).

Enforcement Mechanisms

The County's air pollution control regulations were enacted with the realization that not all regulated sources would automatically take the steps necessary for compliance. The County therefore carries out an inspection program that evidences a real presence at the sources and that enables the County to have a continuing awareness of each source's compliance status. In addition, the County takes appropriate enforcement actions when necessary to ensure compliance.

The various regulations established a number of enforcement mechanisms that provided County officials with the authority and tools they have needed for successful enforcement. The broad variety of mechanisms enabled County officials to negotiate agreements that could realistically accommodate the technical and financial situation of a company while still providing meaningful deadlines and disincentives for noncompliance.

Variance Board. One challenge of enforcement is often that a large number of facilities are suddenly in violation when new regulations are issued. To handle this situation, Allegheny County regulations established a five-person Variance Board in 1972 to review and approve compliance schedules with noncomplying industries. The Board was appointed by the County Commissioners and had to have at least one attorney, one engineer, and one public health specialist. Facilities that were suddenly out of compliance when new regulations were passed were given a certain number of months to file a petition, with the Variance Board, that defined a plan and schedule for coming into compliance. These petitions were reviewed in public hearings in which the company would formally present its plan and the Bureau of Air Pollution Control and the public would comment on the plan. The Variance Board would then decide whether to accept the petition. This proved to be a very successful mechanism for ultimately achieving compliance with regulations that immediately put many facilities out of compliance when the regulations were first enacted. The Board was discontinued in 1981 because most industries were in compliance by that time. Compliance programs for the remaining noncomplying sources were usually established through the new regulations or by the Bureau of Air Pollution Control through negotiations or administrative orders.

Ability to Seek Penalties. The regulations provide County officials with the ability to seek penalties through a magistrate's court and through a Civil Penalty Hearing Board. In such actions, the County presents its case and industry presents its case. Decisions can be appealed to a higher court.

Ability to Issue Administrative Orders. County officials have found that the ability to issue administrative orders has been an important element in the success of enforcement efforts. Administrative orders have proven a valuable mechanism to circumvent lengthy court proceedings. Many orders are consent orders, i.e., the facility agrees to the terms of the order. Some orders have been unilateral. The company can appeal unilateral orders; in such cases, the County tries to resolve differences through a negotiation process.

Ability to Negotiate Creative Settlements. The County has used several innovative approaches in consent decrees to help ensure compliance:

- Performance Bonds. Some companies are asked to post a performance bond. They forfeit the bond if they subsequently fail to meet the terms of the consent decree.
- Escrow Accounts. Some companies were required to establish special escrow accounts to ensure that monies would be available to pay any penalties that might accrue.

- Research Requirements. In some cases, facilities are asked to perform a study to determine how they could best come into compliance.
- Credit Projects. As a substitute for payment of a penalty, companies sometimes agreed to reduce emissions beyond the levels required by the regulations.
- Delayed Compliance Orders. These orders set forth schedules for pollution sources to achieve compliance but protect the sources from further enforcement action as long as the sources remain on schedule with the orders.
- Stipulated Penalties. Some consent decrees and consent orders contain provisions for the payment of stipulated penalties if the decrees or orders are violated. Such provisions set forth agreed-upon fixed or graduated penalties for various types of violations.
- Self-monitoring. Consent decrees often contain provisions for self-monitoring. The goal of self-monitoring requirements is to increase the company's awareness about their state of compliance with the hope that the company will then take steps on their own to correct any violations. To encourage companies to accurately record the data, self-monitoring data are rarely used by the County for enforcement. Companies are required to report any violations they detect and, at times, are permitted to reduce the amount of self-monitoring as a reward for, or in recognition of, good performance. Self-monitoring, in effect, extends the limited inspection resources of the County.

Ability to Consider Economic Factors. The County has used several approaches in its enforcement actions that consider economic conditions or circumstances:

- Pilot Projects. In some cases where a company argued that certain measures were not technically or economically feasible, the company and the County agreed that the company would implement these measures on one or two of their plants as a test of feasibility. Appropriate measures to bring the rest of the company's operations into compliance were negotiated once the pilot results were obtained.
- Phased-in Approach. Companies are not always required to implement all control measures at one time. Sometimes a phased approach has been negotiated.
- Extended Schedules. When a company would have genuine difficulties achieving compliance with a standard schedule, extended schedules can be negotiated. In one case, the County required installation of expensive controls ($30 to $40 million) that never really worked effectively. After a certain period of time, the County began to negotiate with the company to install new controls. In return for a commitment by the company to replace the old control systems, County officials allowed the company to discontinue use of the old controls and use a relatively inexpensive interim system while taking steps to install more effective equipment.
- Maximizing Existing Systems. In cases where a company was on the brink of shutdown due to financial difficulties, the County often waived a requirement for installing new equipment (which would likely have put the company out of business) and instead required that existing control equipment be used as effectively as possible.
- Deferred Control Expenditures. Certain economically depressed industries were permitted to defer air pollution control expenditures for limited periods of time if such monies were invested in new plants and equipment.
- Penalty Payment Schedules. Some companies in financial difficulties are allowed to make penalty payments for violations over a period of time rather than paying the entire amount of the penalty at the time the enforcement action was settled.
- Limited Life Policy. As an alternative to installing expensive pollution control equipment, obsolete, violating facilities that are scheduled to be permanently shut down are permitted to continue to operate for limited periods of time while using interim control measures.

Resources

The Bureau of Air Pollution Control's 1991 budget was just over $3 million. About half this budget comes from the federal government, $1 million from the County (derived largely from property taxes), about $0.5 million from permit fees, and over $100,000 from penalties. A special High Priority Fund provided by the U.S. EPA is set aside for high-priority projects. Budgeting for using this Fund does not have to go through the normal County administrative budget process.

The Bureau of Air Pollution Control has a staff of 55 (as of 1991). The Bureau is divided into four divisions (Enforcement Division, Air Quality Monitoring and Source Testing Division, Engineering and Planning Division, and Computer Services and Data Analysis Division) and an Administrative Services and Training Section.

Monitoring

Fifteen full-time staff of the Air Monitoring and Source Testing Division are responsible for monitoring. The Division measures air quality using both continuous and intermittent monitors.

Over the years ambient monitoring has become more sophisticated. The County now operates a monitoring network of 39 sites monitoring six gaseous pollutants and four measures of particulates. The gaseous pollutants are sulfur dioxide, carbon monoxide, ozone, nitrogen oxides, hydrogen sulfide, and benzene. Air quality is measured continuously by the monitors in the field and collected about six times per minute by data loggers located at the sampling sites. A central computer polls the data loggers once each hour using dial-up telephone lines to obtain real-time data. This computer permanently logs the data and processes it for use. For example, the computer processes the data by calculating an Index for sulfur dioxide, carbon monoxide, and ozone that is used for daily reporting of air quality to the public.

There are four measures of particulates. Two are continuous and two are intermittent. One of the continuous methods, the tape sampler, was developed locally in the 1970s to provide inexpensive real-time hourly data and is used to calculate the particulate Index for the public. The other samples fine (i.e., health-related) particulates, referred to as PM-10, and is used at two sites. Both types are connected to the central computer in a manner similar to the gaseous pollutants.

The two intermittent particulate sampling techniques measure either total suspended particulates or the finer health-related fraction. These require sampling for 24 hours and then several days for analysis of the filters in the laboratory. The filters are also used to determine ambient levels of lead, benzo(a)pyrene, other heavy metals, chlorides, sulfates, and nitrates.

Although the federal standards for particulates are for suspended, fine (i.e., health-related) levels of particulates in the air, the public is often concerned about dust falling on their property from nearby sources. The County employs an inexpensive technique to help detect and screen such problems. Dustfall cans are set out for 30 days and the dust collected is then weighed and, often, examined microscopically in the laboratory.

Emissions

One important aspect of the Bureau's work involves tracking emissions from sources. Several staff are assigned to developing and maintaining a computerized emission inventory. The inventory includes data on source names, types, locations, capacity, emission parameters, and emission rates for both actual and allowable emissions. These data are often obtained by stack sampling. The County usually observes stack tests conducted by industries to assure correctness and will split samples with the industries when doing its own laboratory analysis; however, the County is capable of conducting its own tests when needed.

The emission inventory data are often used in computerized diffusion modeling. The modeling allows the County to predict air quality under various conditions by adjusting parameters in the model, but modeling is difficult in Allegheny County due to its river valley topography which is not simulated well by most models.

Inspection

Approximately 1,600 permits were issued to air pollution sources in Allegheny County in 1991. These include 100 to 150 major sources. About 200 sources are inspected each year. Other, mostly smaller, sources are believed to be in compliance based on periodic or occasional inspections, self-reporting, the nature of the operation, or the fact that no complaints have been received.

Inspections generally focus on the major pollution sources. Historically, the federal government has determined priorities for inspection. In 1991, Allegheny County submitted its own priorities to the U.S. EPA for approval. The County has three full-time inspectors and one engineer dedicated to inspecting coke plants; six engineers who inspect other industrial sources; and four full-time inspectors who respond to citizen complaints. The number of plant inspectors has stayed relatively constant since the early 1980s. Although there are fewer sources in 1991 than earlier, the inspections have become more complicated.

Most sources on the priority list for inspections are inspected at least once a year. A typical inspection is unannounced, with the inspector spending about one day checking plant records and control equipment. Some sources are inspected on an as-needed basis (e.g., when a complaint is received). When an inspector finds a potential violation, he or she fills out a form documenting the alleged violation, and provides a copy to the source and a copy to the Legal Section of the Enforcement Division. The Legal Section determines whether a violation has occurred and, if so, decides whether and how to pursue the case. The inspector may be called on to obtain additional information and/or testify.

Role of the State and Federal Governments

To help implement Pennsylvania's State Implementation Plan, the U.S. EPA has supplied funding to Allegheny County. Allegheny County has used these funds to hire additional staff and to purchase equipment. The County has also received technical assistance from the U.S. EPA.

Generally, the state and federal agencies approve the County's regulations and air pollution control program and then let Allegheny County manage and enforce the program. In the early 1970s, however, the state and federal governments did become involved in a challenging enforcement situation concerning coke plants. These sources were very large and difficult to control. Because compliance required substantial emission reductions and investment in pollution control equipment, the industry was generally unresponsive to initial enforcement efforts by the County. The industry argued that it was not technologically possible to meet the standards. This argument was difficult for the County to counter, since County officials did not have a broad national or international knowledge about the available technology for reducing air pollution in this industry.

The state of Pennsylvania and, eventually, the federal government became involved in a series of joint actions against the major coke industry polluters. The national implications of the case were another stimulus for federal involvement; effective enforcement in this part of the country would send a signal to the coke industry in other parts of the United States that the federal government was committed to taking whatever measures were necessary to achieve compliance. As compliance was achieved, the state and federal governments reduced their level of involvement. Now that most of the coke plants are in or near compliance, the County is once again becoming fully responsible for enforcement.

Role of Environmental Groups and the Public

Allegheny County has several environmental groups that have been active and effective. One of the most active groups, the Group Against Smog and Pollution (GASP), was formed in 1969. The County's progress in air pollution control is partly due to the efforts of environmental groups to ensure public awareness and government action, and to their willingness to participate by serving in a voluntary capacity on the Advisory Committee and its various Subcommittees.

During the 1970s, enforcement was aided by strong public support for environmental protection. In the 1980s, the primary public concern in the County shifted to employment and economic development, which was sometimes a source of conflict. Nevertheless, concern and support for protecting the environment remained strong.

Role of Industry

In the early 1970s, industry was at first resistant to compliance. Enforcement and penalties were needed to demonstrate the government's commitment to achieving compliance. Industry's role has reversed since that time. Most industries now recognize the need for air pollution control, and their approach is to achieve compliance at a reasonable cost rather than avoid compliance. Local industries now serve on the Advisory Committee and participate in regulatory development. Their experience and expertise has been directed toward solving air pollution problems.

To the extent possible, industry has been allowed to choose how it will comply. For example, if more than one type of control system will properly control emissions, industry can usually choose the system it prefers. Industry is encouraged to be sensitive to citizen concerns, to foster good community relations relative to environmental matters and to be acutely aware of the impact of their emissions on their neighbors. The County acknowledges that in the final analysis it is industry that actually reduces air pollution; the County attempts to provide public recognition of companies that have exemplary environmental control programs or projects.

At least one enforcement program in the County encourages increased industry involvement. There are three coke plants in the County. These plants have a combined total of 19 operable batteries. Each coke battery is usually inspected at least 30 times a year by County inspectors. After the end of each calendar quarter, the County sends each plant manager a written summary of the inspection results during that quarter along with an offer to "settle" any violations through payment of penalties and/or taking appropriate remedial actions. County technical and inspection staff meet with the plant operators during each quarter to review performances, identify problem areas, and discuss corrective programs. This program has contributed to an increased awareness of environmental performance by plant management and production workers. In at least one case, the program has encouraged the use of problem-solving teams in the plant to achieve performances that are significantly better than those required by the regulations.

Results

In the early 1970s, air quality standards were often exceeded. In one location in the Monongahela River valley, air quality exceeded the short-term particulate standard about every third day. About 12 times a year the County Health Department issued high air pollution alerts that required industry throughout the valley to curtail production.

Enforcement efforts in the early 1970s required diligence. Court action was often necessary to ensure that companies would live up to the terms of the consent decree they had signed. As a result of the Bureau of Air Pollution Control's enforcement activities, industries throughout the County began to install control equipment and take other measures to curb pollution.

By the mid-1970s, particulate emissions had been reduced by 65% and sulfur dioxide emissions by 57% compared to 1970 levels. Air quality continued to improve and, by the late 1970s, frequent air pollution alerts had ended.

In the 1980s, air quality has improved further due to continued strict enforcement efforts, improved control actions by industry, and a general decline in industrial activity. By the late 1980s, there were no excedances of the annual average and only occasional short-term violations usually associated with the breakdown of control equipment. The three-year average ozone standard is exceeded about once a year.

In 1990, all of Allegheny County was in attainment of federal ambient air quality standards for ozone, carbon monoxide, nitrogen dioxide, and lead, but not for sulfur dioxide and inhalable particulate matter. The annual average standards for inhalable particulate matter, sulfur dioxide, and nitrogen dioxide were met. However, there were 12 short-term (24-hour) excedances for two pollutants in 1990, compared with 14 excedances for three pollutants in 1989.

Factors Influencing Success

Many factors have contributed to successful air pollution control in Allegheny County since 1970. County regulations clearly defined the standards and measurement methods. These regulations also provided a variety of enforcement mechanisms that enabled County officials to effectively take action against violators and to negotiate creative settlements that, while strict, enabled companies to come into compliance within the limits of their resources. Also, the Variance Board was important in helping County officials effectively manage enforcement of the large number of companies that were suddenly in violation when the regulations were passed.

Strong public support for air quality provided a climate that supported enforcement efforts and created a social pressure for compliance. The establishment of the Air Pollution Control Advisory Committee created an important forum for cooperation and dialogue between the various sectors concerned with or affected by air pollution control. This forum has helped turn potentially adversarial relationships into a resource for effective regulatory development and program implementation.

The relationship with the state and federal governments has also been an important factor. Because the County is enforcing a federally sanctioned and required program, the federal government has provided financial resources and technical assistance that have enabled the Bureau of Air Pollution Control to hire additional personnel and purchase monitoring equipment. Also, the involvement of the federal and state governments enabled the County to successfully prosecute some particularly difficult enforcement cases, which sent a strong deterrent message to other members of the regulated community.

CASE STUDY 2: RESPONSIBLE PROCESSING OF DERELICT CARS IN THE NETHERLANDS

Introduction

Because the Netherlands is so densely populated, environmental problems are often exacerbated. With the substantial growth in waste generation during the 1960s and 1970s, available space for waste dumping was rapidly depleted, and existing dump sites began to cause serious pollution problems. Consequently, dumping was no longer considered a responsible disposal option.

An increasing number of people in the Netherlands have become involved in dismantling old cars. As a result, the number of derelict cars has risen sharply, leading to three interrelated problems:

- Environmental Problems. Liquids (such as motor oil, coolants, and battery acid) have contaminated the soil. Burning of old cars contributed to air pollution. The large numbers of old wrecks also caused aesthetic problems.
- Economic Problems. Too many people have become involved in demolishing old cars as a side line. Under these circumstances, environmentally responsible operations could not be commercially viable.
- Social Problems. Many of those engaged in dismantling old cars have little respect for authority. The wrecker yards generally operated without a permit and did not comply with environmental requirements. The government tended to avoid intervention since these groups could be expected to respond aggressively.

The environmental problems could be solved only if the economic and social problems were tackled simultaneously. This case study examines how one province in the Netherlands, the province of North Holland, developed and implemented a plan to solve the environmental problems associated with derelict cars.

Regulations

The Waste Substances Act was enacted in the Netherlands in the late 1970s. Under this Act, companies engaging in waste processing are required to have a permit. In judging whether a company may be granted a permit, the authorities consider whether it is technically and economically feasible for a facility to operate in an environmentally responsible manner. Thus, this law provided the authority to tackle both the environmental and the economic problems.

Derelict Cars Plan

Each province in the Netherlands was asked by the national government to draft a plan indicating how it would restructure wrecker yard operations. The province of North Holland had its first plan ready in 1986. The plan aimed to promote:

- Efficient and thus commercially viable execution of demolition activities.
- Compatibility of the wrecker yards with land use plans.
- Environmentally responsible operations.
- As much recycling and reuse of old car parts as possible.

Implementation of the plan was expected to put many yards out of business. Reduced competition would enable the remaining yards to do enough business to finance the measures needed to protect the environment. The permit system provided an instrument for achieving these aims, and subsidies were available to help close down unprofitable yards and, in some cases, to take environmental measures.

Implementing the Plan in North Holland

The province's first inventory showed 198 derelict car sites. That number has since grown to 210, partly due to reports by area residents and images on aerial photographs.

Comprehensive permitting followed by enforcement would have been the most important means for realizing the plan's goals. However, a shortage of qualified officials, together with the problems at the wrecker yards, made it likely that it would be many years before all the yards were permitted. To prevent further environmental degradation, the provincial government and the Public Prosecutor decided to bridge this period by prescribing so-called "rules of conduct" for the yards (in anticipation of permit requirements at a later date). These rules prohibited the burning of wrecks and cables, required that liquids be drained out of and batteries removed from vehicles, and mandated responsible storage and disposal of oil. The provincial government informed the wrecker yards in writing about the Waste Substances Act, the anticipated permit requirements, and the rules of conduct.

The provincial government also established an intensive inspection program. The manpower and resources needed were estimated, and a computer system was set up to store and process the results. The yards were inspected three times in the first year. The first round of inspection provided information to the wrecker yards; the second and third inspections checked for compliance with the rules of conduct.

Figure 11-2 summarizes the results of these inspections. When a violation was found, the yard received a formal warning and the Public Prosecutor and police were notified. If violations were found again during the third and following rounds, charges were brought. The first inspections showed that only 50 percent of the wrecker yards were in compliance with the rules of conduct. Since then this fraction has risen to 75 percent. Charges have been brought against 40 companies. Appropriate sanctions are being considered. Closure of the yards with repeated violations is one option (under criminal law); imposition of fines for every day a yard is out of compliance is another (under administrative law).

Sixty-five wrecker yards have been granted permits, and are being monitored for compliance with the permit requirements. Thirty-five yards that applied for permits were refused, and 70 permit applications are being processed. Thirty yards were provided with financial support that enabled them to cease their activities, and an additional 10 stopped on their own initiative.

Conclusions

Dutch authorities have drawn several conclusions from this case study:

- Environmental problems cannot be solved in isolation from other social problems.
- Solving these problems requires time, manpower, and perseverance.
- Implementation requires a good written plan with attention to permitting and enforcement.
- The plan must indicate the amount of manpower and resources needed for its implementation.
- Activities should be planned and monitored; the approach should be evaluated periodically.
- Phased introduction of the requirements the companies have to meet raises the companies' motivation to comply and allows the manpower available for enforcement to be used more effectively.
- Clear and consistent enforcement is essential to achieve compliance; successful enforcement requires that agreements be made with the agencies involved (the environmental department, Public Prosecutor, and police).
- Execution of the plan was aided by the availability of financial support.

CASE STUDY 3: COLLECTION AND PROCESSING OF HAZARDOUS WASTE FROM SHIPS IN THE NETHERLANDS

Introduction

Liquid wastes from ships, such as used oil, bilge oil and bilge water, slobs, washwater, and ballast water, can cause major environmental problems if they are not collected and processed in a responsible way. In the Netherlands there are 1.7 million tons of wastewater containing oil and 300,000 tons of hazardous waste from both ocean-going ships and ships confined to the inland waters. Discharge of these wastes into surface water causes a real environmental burden. Until recently it was unclear how the ships were getting rid of these wastes. There were also no clear regulations that could be used to tackle this problem. Analysis of the problem showed that:

- A large number of companies collected this type of waste. Consequently, the market was spread too thinly to allow for commercially viable collection in all

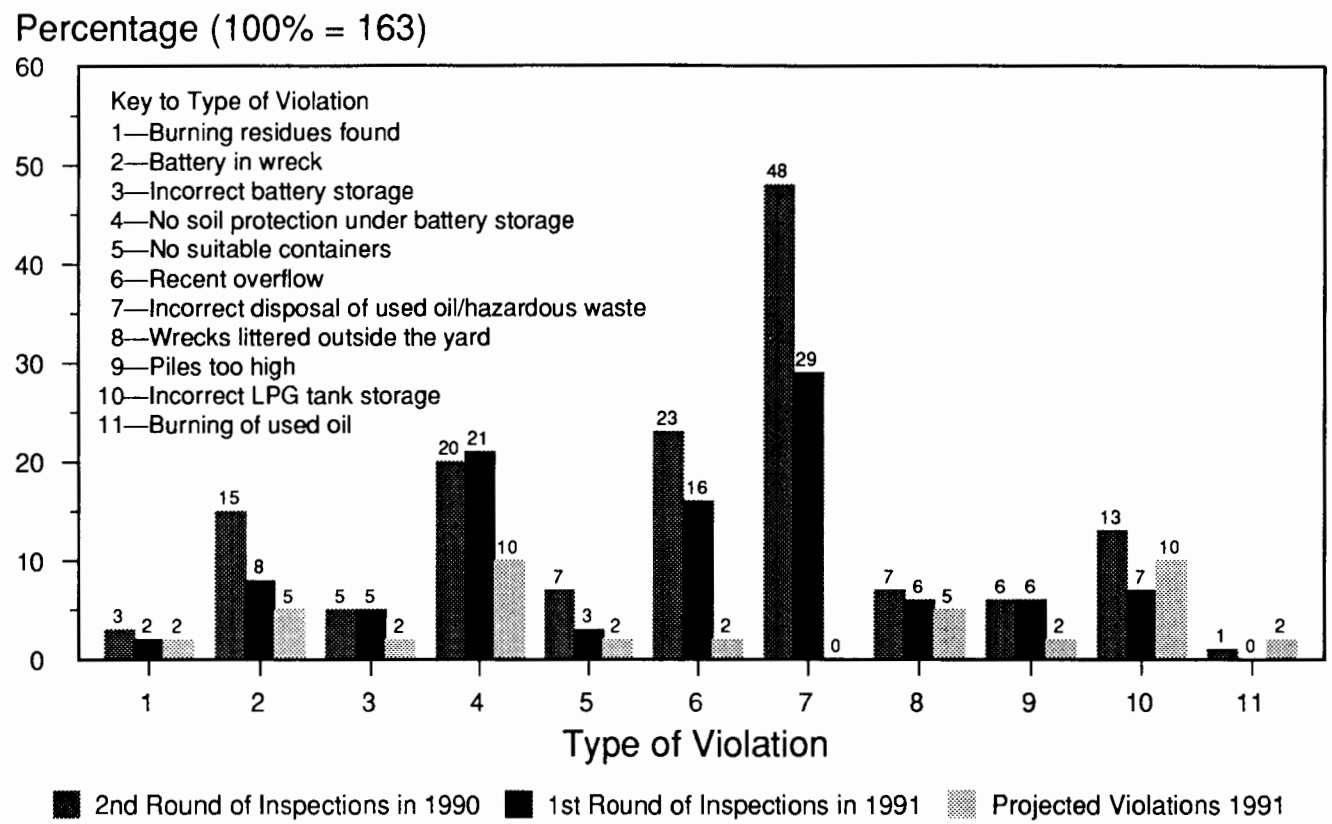

Figure 11-2. Percentage of Wrecker Yards in Violation of Requirements in the Province of North Holland, the Netherlands, 1990-1991.

cases. The collection companies did not always have the financial resources to undertake the necessary environmental investments. Bunker ships played a significant role in collecting these wastes; they accepted oily waste streams, often free of charge, as a service to their customers. However, it was unclear what these bunker ships ultimately did with the hazardous substances they collected in this way. The large number of companies involved made monitoring very difficult.

- The ships were required to deliver their wastes containing oil and/or chemicals to companies with permits. However, the permit holders were not required to accept the wastes. Only attractive loads were accepted. High fees were charged for acceptance of other wastes. So it was not really surprising that a lot of this liquid waste was discharged overboard, secretly, at night and during foggy weather.
- The large numbers of ships and their mobility made enforcement difficult.
- The ship operators and the government had different opinions about the danger posed by the liquid waste. Ship operators tended to regard waste with a high oil content as a product rather than a waste. If the liquid consisted mainly of water with just a little oil, then the ship operators did not see any problem with dumping it overboard.

The Decree on Collection of Wastes From Ships

A new regulation was developed to end to this situation. The decree on "hazardous wastes from ships" became effective in 1985. Its purpose was to limit the number of permit holders entitled to collect and process ship wastes, so that waste disposal would be more economically viable and thus collectors and processors could afford to conduct their business in an environmentally responsible manner. The regulation also made it mandatory for the permit holders to accept waste. The new permitting system made it possible to distribute the collection companies all around the country so that ships' operators could dispose of their waste legally no matter where they were. A notification requirement for both the ship's operators and the collection companies was included as an aid to enforcement. All these measures were designed to substantially improve compliance and enforcement.

Enforcement Approach

By 1989, the restructuring of the collection and processing system was nearly complete. The permits had been granted, and the ship operators had been informed about the new regulation and had received a brochure with the names and addresses of waste collectors. The time was ripe for intensive enforcement because:

- The regulated community understood the requirements.
- Inspections would reveal how effective the new collection system was.

Two types of inspections were conducted:

- Inspections of ships to check for illegal discharges and waste deliveries to companies without the necessary permit.
- Inspections at the companies collecting and processing waste from ships.

The shipboard inspections were to be carried out on the water by the river police. The government decided to hire a private agency to inspect the collection and processing companies because:

- There was not enough skilled manpower available within the government at that time.
- It was expected that a number of intensive inspection rounds would result in radical improvements in compliance, so that less manpower would be needed for future inspections.
- The inspections had to be started in the near future.

An enforcement program was drawn up. The companies to be inspected were divided into two categories. One group, the collectors and cleaners, which collect for commercial purposes, would be inspected three times a year. Most ship wastes end up with these companies. The other group, the bunker companies, terminals, refineries, and wharves, would be inspected twice a year. Collection is a side line for them, often provided as a service to their clients.

The inspections were standardized, primarily to facilitate the subsequent transfer of inspection activities from the private to the public sector, but also to help ensure clarity and effectiveness. A checklist was developed to ensure standardization.

During the first year, inspections were performed to promote compliance by increasing awareness of the program and informing companies if they were out of compliance. Companies received written notice of violations. It was agreed with the Public Prosecutor that charges would be brought in the second year. A standard charge has been developed for this purpose. Ninety companies have been inspected two to three times during the past year.

Enforcement Results

A comparison of the first and last rounds of inspections of collectors and processors reveals a sizable improvement in compliance. Enforcement has had the expected effect. Many companies have applied for and been granted permits, although they do not carry out any activities in this area or, in the case of the bunker companies, perform them only as a service for their best clients. The fees charged for collection and processing were found to vary widely.

The situation is not nearly as good with respect to prevention of illegal discharges. Forty percent of ship operators admit to discharging wastewater containing oil illegally. They still see no reason to deliver watery waste streams to processors. They also believe that it is too much trouble to dispose of their waste legally (because of long waiting times, or even detours).

They have major problems with the prices they have to pay, especially when they compare the situation to other countries where waste can be disposed of legally without any charge.

The collection structure is not yet sufficient to prevent illegal discharges. The approach of information-oriented inspections seems to have resulted in more clarity about the requirements after collection. There is reasonable compliance with the rules applying to collection and processing.

The creation of a free waste receival facility in every port would prevent illegal discharges. The cost incurred for disposing of these wastes could be covered by the port mooring fees.

CASE STUDY 4: ENFORCEMENT OF MUNICIPAL WASTEWATER REQUIREMENTS IN THE UNITED STATES OF AMERICA

Background

Under the Federal Water Pollution Control Act of 1972 and subsequent amendments, the U.S. EPA established specific effluent limitations for municipal wastewater treatment plants. In general, municipal wastewater treatment plants must provide a minimum of secondary treatment. During the 1970s and much of the 1980s, the U.S. EPA provided substantial federal funding (up to 85% of the capital costs) to municipalities for construction of municipal wastewater treatment facilities. Nevertheless, by 1977, less than half of all POTWs were in compliance with the requirements. A 1979 program to address this problem was unsuccessful. Two factors contributing to the failure were:

- The U.S. EPA readily extended deadlines for compliance.
- The U.S. EPA and the states were reluctant to enforce against municipalities that had not received federal grants to build new facilities.

Several government studies revealed a severe noncompliance problem. The U.S. Congress and the public became increasingly concerned about the problem and, as a result, the U.S. EPA

and the states created a work group in 1982 to develop a new strategy for dealing with municipal noncompliance. This strategy was a sharp contrast to previous policies: Enforcement would now be the key tool to achieve compliance, and all municipalities were expected to comply regardless of whether or not they had received federal financial assistance. This new policy — the National Municipal Policy (NMP) — became effective in January 1984.

The policy was backed by amendments to the Clean Water Act that greatly restricted the conditions under which extensions could be granted. The amendments allowed no extensions beyond July 1, 1988.

Enforcement Activities

With the initiation of the NMP, enforcement by the U.S. EPA and the states became the single most effective tool to bring POTWs into compliance. A list of noncomplying facilities was developed, and the U.S. EPA and the states pursued enforcement against them. By 1987 almost 80% of all NMP facilities (including major and minor facilities) were under an enforcement order, either administrative or judicial. After this point, all POTWs subject to enforcement action that had not started construction were dealt with primarily by judicial action, since these facilities would be incapable of meeting the July 1, 1988, compliance deadline. By the second quarter of 1988, almost 20% of all NMP major facilities were subject to judicial referrals (see Figure 11-3). On average, NMP facilities received 1.5 state or federal enforcement actions. This means that almost all NMP facilities have been under some sort of enforcement action.

Results

The NMP was a highly successful program targeted at 1,478 POTWs, many of which were very large. Over 71% of these 1,478 facilities came into compliance by the July 1, 1988, deadline for achieving required treatment (see Table 11-1). As of that date, NMP facilities were removing an estimated 2.325 million more pounds (1.053 million more kilograms) per day of conventional pollutants and 15,000 more pounds (6,800 more kilograms) per day of toxic pollutants than in 1984.

The NMP brought the total population of major treatment plants in compliance to 90%. Even more impressive were the resulting environmental benefits. By 1984, 95% of the total sewage processed in the United States was receiving secondary or better treatment, affecting 108 million people.

Some 650 (43%) of the 1,478 targeted facilities contributed to known water quality problems and, consequently, were required to install advanced wastewater treatment technology. Of these facilities, 525 POTWs, affecting an estimated 8,000 stream miles (12,800 stream kilometers), met the July 1988 deadline because of the NMP.

Reasons for Success of the National Municipal Policy

The NMP owed its success almost entirely to direct enforcement efforts. Before the NMP was implemented, municipalities typically believed that compliance was achieved by acquiring grant funds. Permittees believed that the availability of federal funding was a key part of determining whether the federal government and the states would enforce the regulations. Enforcement actions did not follow a consistent pattern until the National Municipal Policy was developed. The NMP program was successful largely because of several elements in the enforcement plan:

- First, a team of U.S. EPA managers and staff was specifically assigned to make the effort succeed.
- Second, the media, public, and the Administrator of the U.S. EPA supported the NMP.

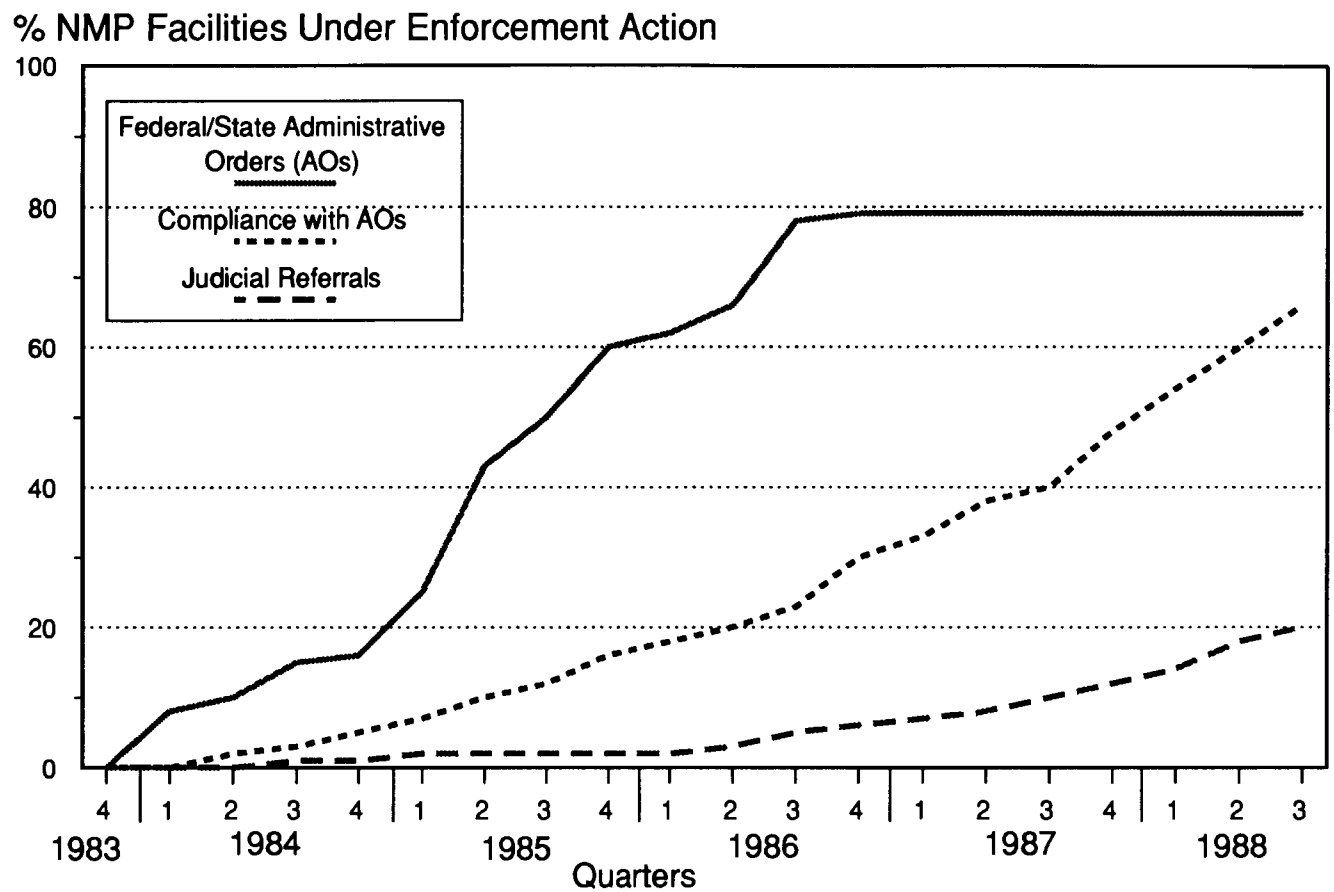

Figure 11-3. Enforcement Actions vs. Compliance.

TABLE 11-1. COMPLIANCE STATUS OF NMP FACILITIES
(as of July 1988)

	Number	Percentage
Total Major POTWs	3,731	
Not in Compliance by 1984	1,478	100%
In Compliance by 1988	1,055	71%
On Enforceable Schedule by 1988	235	16%
Judicial	195	
Administrative	40	
Not on Enforceable Schedule by 1988	188	13%
Judicial - Filed	60	
Judicial - Referral, not Filed	38	

- Third, the media gave wide coverage to enforcement initiatives and penalty results.
- Fourth, a unified state/federal policy was established at the outset and the states generally supported the strong enforcement measures.
- Fifth, the program established a fixed universe of facilities to target and tracked individual facilities on a case-by-case basis, continuing to pressure facilities until compliance was reached.
- Sixth, there was a clear statement and follow-through on the policy that there was no link between grant funding and statutory compliance.

All these factors produced a strong and effective enforcement presence. The NMP set examples and precedents through federal and state enforcement actions and through favorable rulings on important cases. These cases and the significant penalties associated with them permanently altered the commonly held attitude that it was improper for the U.S. EPA and the states to enforce against municipalities. For the first time, enforcement actions and penalties became realistic expected responses to noncompliance, and this created the possibility of future benefits from deterrence among municipalities.

CASE STUDY 5: ENFORCEMENT OF MARKETABLE REDUCTIONS OF LEAD IN THE UNITED STATES OF AMERICA

Background

Because of the clear adverse effects of lead on human health, the U.S. EPA embarked on a program (the Lead Phasedown Program) to reduce the lead content of gasoline. Gasoline lead was first controlled in the United States in October 1979 by limiting the average concentration permitted in a refinery's total gasoline pool. As knowledge of the severity of the negative health effects of lead grew, the U.S. EPA evaluated the effectiveness of these regulations, and in October 1982, created tighter standards and a trading system that allowed refineries requiring less lead than the standard to sell their excess to other less technologically advanced refineries.

In 1985, the standard for lead was tightened further, and a banking system was introduced. Under the banking provisions, a refiner was allowed to store in a bank account the difference between the standard and the larger of either actual lead usage or 0.10 gplg (grams per leaded gallon). The banked lead rights were available for use or transfer to other refiners or importers during any future quarter through 1987.

Enforcement Activities

Compliance was monitored through a self-reporting system. The U.S. EPA checked the internal consistency of reports and corroborated them with independent reports from manufacturers of lead additives. At the end of 1986, the U.S. EPA began conducting the first full-scale audits of refiners.

In the Lead Phasedown Program, a high degree of voluntary compliance could have been expected because detection was more likely based on the required self-reporting which could be corroborated with an outside source of information (manufacturers of lead additives) to verify refiners' reports. Further, the regulated universe was primarily large refiners that were vulnerable to public opinion. The danger from lead toxicity was becoming a prominent public concern, which increased the likelihood of public condemnation of violators. However, two factors reveal that voluntary compliance was far below a desirable level:

- The initiation of the audit program late in 1986 revealed substantial noncompliance.
- Violations fell sharply after the audit program had been in place long enough to exert a deterrent effect (see Figure 11-4).

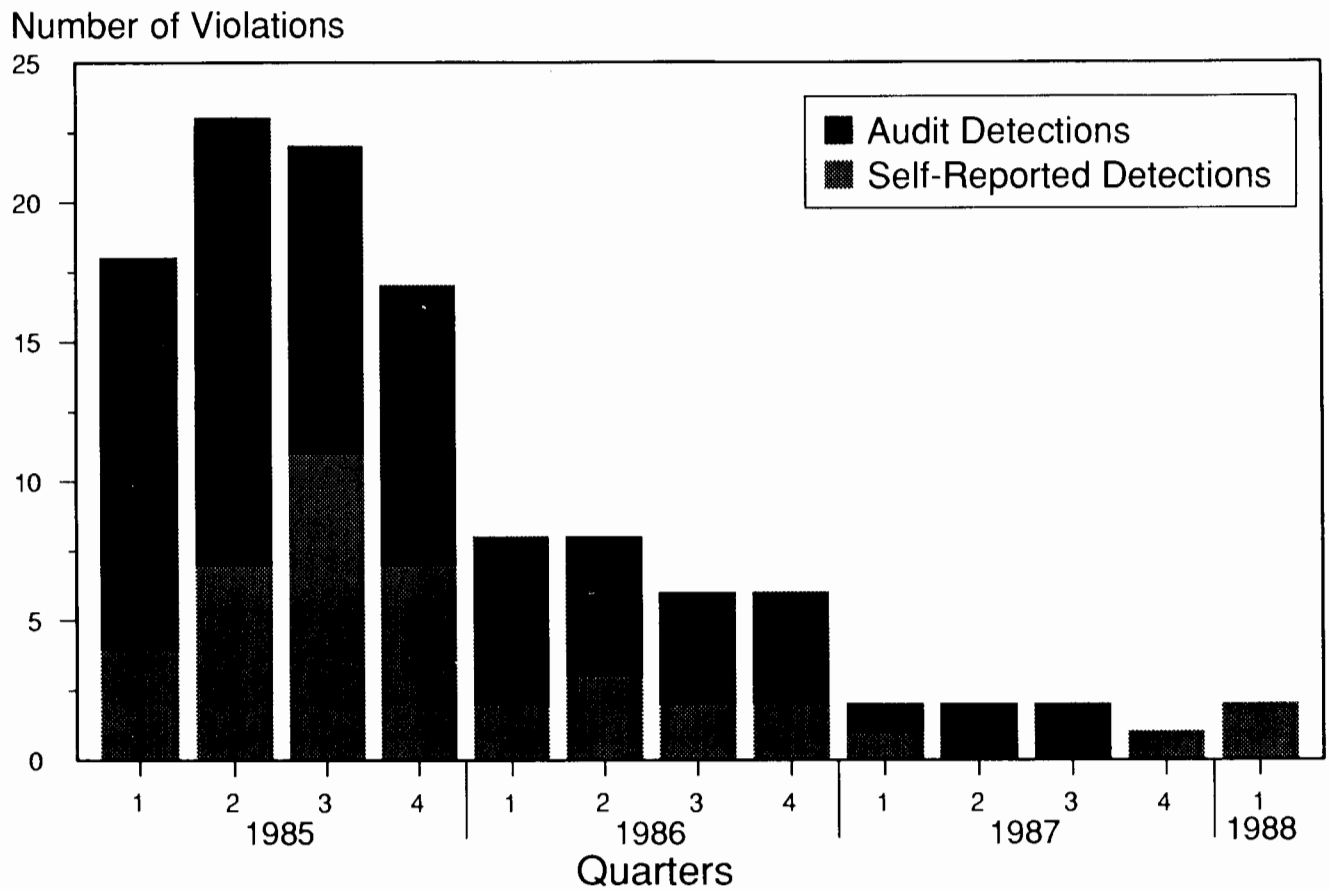

Figure 11-4. Violation Frequency by Quarter of Occurrence.

Distribution of violations through time shows that audits uncovered earlier instances of severe noncompliance while deterring new violations. In 1985, before the initiation of audits, violations were at their highest level, probably because of the opportunities for illicit profit presented by the accumulation period of the banking program. Most of these violations went undetected until EPA initiated the audit program in late 1986.

Many of the violations detected through audits were large, and the enforcement actions taken against the violators were given wide publicity. During 1987 when publicity would have drawn the attention of potential violators, there was a sharp decline in new violations to a level about one-third of that seen in 1986 (see Figure 11-4). This pattern suggests that the audits and the resulting Notices of Violation (NOVs) successfully reduced new illegal activity through their deterrent effect.[2] This pattern occurred even though the audit program had become more sophisticated in 1987 and therefore more likely to detect violations.

When audits were initiated, the penalty policy was changed to make violations much more costly to the perpetrator. This also helped deter violators. For example, 17 NOVs were issued in 1987 after the audit program was introduced. A total of $54.4 million in penalties had been issued by the autumn of 1987, 18 times the average of the previous four years. The largest settlement during this period was for over $2 million.

Results

By the end of 1987, the Lead Phasedown Program as a whole had removed a cumulative total of 380 billion grams of lead from gasoline production (see Figure 11-5). Enforcement actions were responsible for removing 150 million grams of these 380 billion grams in the form of lead rights that had been permanently removed from the market. This reduction represents health benefits (see Table 11-2) estimated to be worth about $40 million (in 1983 dollars).

Deterrence

The principal elements generally considered necessary for deterrence were strongly present in this enforcement program. First, there was a credible likelihood of detection. Before regulations became complicated enough to require audits, monitoring was easy because the number of regulated entities was reasonable and lead manufacturing reports were available as an independent source of information on the extent of compliance. Banking and trading made detection of violations difficult, which correlated with an increase in violations during this period. The introduction of individual audits made detection of violations much more probable once again, and violations dropped.

Second, the consequences of detection were serious. With the initiation of audits for individual operations, a new penalty policy in mid-1986 that raised penalties, and the resulting high settlements, the consequences of violating the law became quite significant.

Third and fourth, the audit program ensured a fair and quick response: audits revealed violators immediately, using a consistent standard of tests applied to each refinery audited anywhere in the country. NOVs resulting from the audits received wide publicity in both the public media and trade press. For an industry dominated by large companies vulnerable to public opinion, negative publicity was very effective. The combined presence of these elements created the necessary environment for successful deterrence.

[2]This drop in detected violations may also be explained in part by the fact that suspected violators were targeted for audits first. As time went on, refineries were more randomly selected for audits.

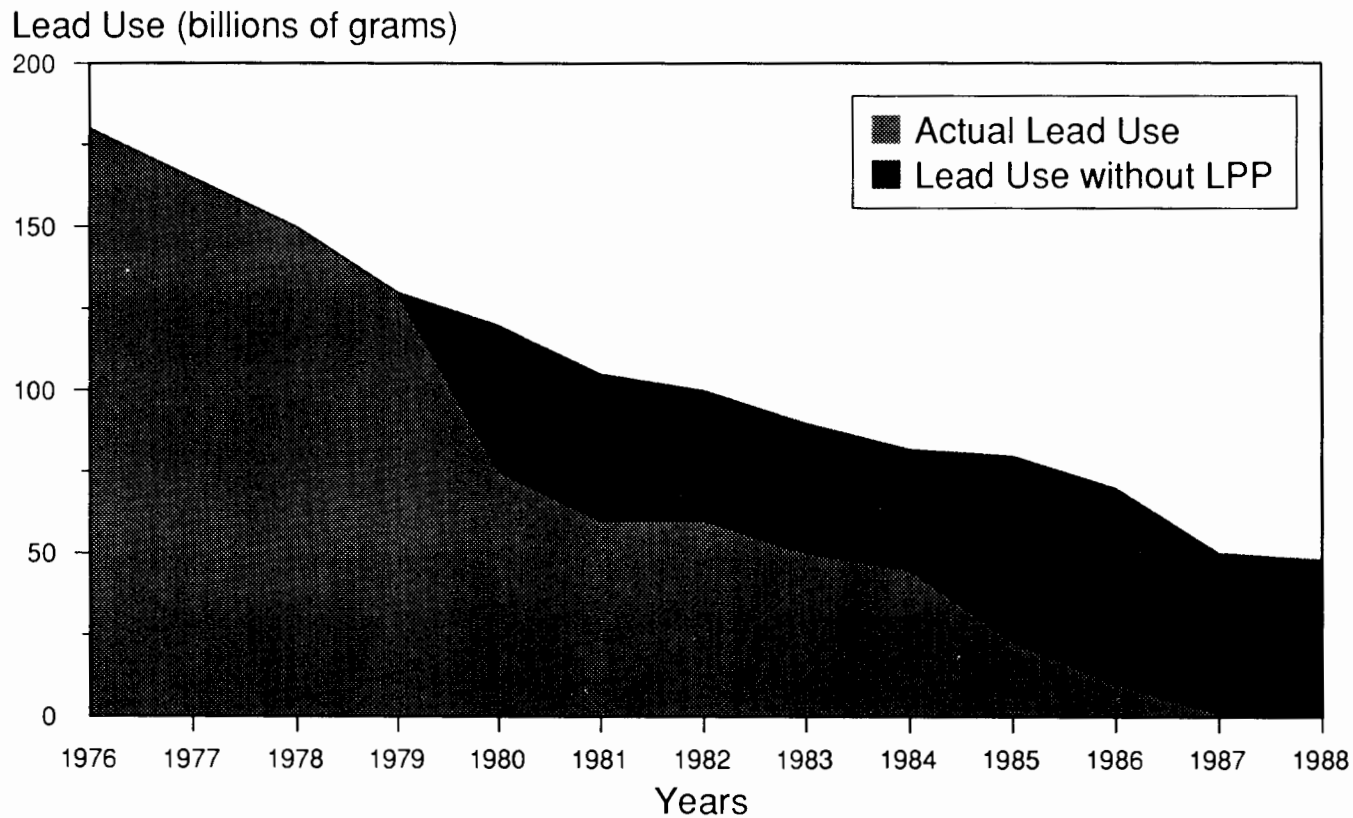

Figure 11-5. The Effect of the Lead Phasedown Program (LPP) on Lead Use.

TABLE 11-2. ESTIMATED HEALTH BENEFITS FROM THE 150 MILLION GRAMS OF LEAD REMOVED FROM GASOLINE PRODUCTION AS A RESULT OF DIRECT ENFORCEMENT

Condition	Estimated Number of Cases Eliminated
Cases of adult hypertension	7,417
Myocardial infarctions of adult males	22
Strokes - adult males	5
Deaths - adult males	21
Children with blood levels of 30 ug/dL	202
Children with blood levels of 25 ug/dL	674
Children with blood levels of 20 ug/dL	2,225
Children with blood levels of 15 ug/dL	6,859

[1]mg/dL = micrograms per deciliter

Conclusion

The Lead Phasedown Program forced refineries to reduce lead use in gasoline through a series of tighter regulations between 1979 and 1985. At the same time, the program introduced new methods of compliance including trading of lead rights, and later, banking of these rights — methods of compliance that offered flexibility, but made detection of violations more difficult. Although the emission reductions from direct enforcement were large, the sharp decline in new violations after 1986 suggests that enforcement had an even larger impact through deterrence.

12. INFORMATION RESOURCES

The following list of information resources includes references that were used in writing this text, as well as other references on enforcement that may be of interest to the reader. Additional references will be added periodically.

INTERNATIONAL SOURCES

U.S. Environmental Protection Agency and Netherlands Ministry of Housing, Physical Planning and Environment. 1990. ***International Enforcement Workshop Proceedings.*** Utrecht, The Netherlands, May 8-10. This two-volume publication contains papers presented at the International Enforcement Workshop held from May 8-10 in Utrecht, the Netherlands. Workshop participants included environmental officials from foreign countries and international organizations. Papers were presented by these participants on domestic enforcement program strategies, tools and management systems; domestic intergovernmental enforcement relationships; international transboundary pollution problems; and enforcement of international agreements. Volume I is 349 pages long and contains 22 papers. Volume II is 133 pages long and contains additional papers, remarks delivered at the workshop, a summary of the discussions, and a list of speakers and participants. Copies can be obtained from:

Compliance and Policy Planning Branch
Office of Enforcement (LE-133)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
USA
(Telephone: 1 202 260 7550)

Netherlands Ministry of Housing,
Physical Planning and Environment
(VROM)
Hoofdinspecteur
Postbus 450
2260 MB Leidschendam
The Netherlands
(Telephone: 31 70 317 4174)

Organisation for Economic Co-Operation and Development, Environment Committee. October 29, 1986. ***Improving the Enforcement of Environmental Policies.*** ENV(86)20. This 53-page document focuses on enforcement in environmental quality management and how it can be improved. The differences in environmental enforcement approaches among OECD countries are discussed. Three case studies on enforcement in the Netherlands, United States, and United Kingdom were also prepared for OECD:

- Lee, Norman. 1984. ***The Enforcement of Environmental Policies in the United Kingdom.*** ENV/ECO/84.5.
- Suurland, Jan. June 1984. ***Regulatory Reform of Environmental Policy in the Netherlands.*** Background paper for the OECD International Conference on Environment and Economics.
- Wasserman, Cheryl E. 1984. ***The Enforcement of Environmental Policies in the United States.*** ENV/ECO/84.6.

Copies of OECD documents can be obtained from:

Organisation for Economic Co-operation and Development
Environment Directorate
2, rue Andre-Pascal
75775 PARIS CEDEX 16

France
(Telephone: 45 02 77 00)

International Chamber of Commerce. June 1989. ***Environmental Auditing***. Publication 468, ISBN No. 92-842-1089-5. This 25-page publication gives the ICC's position on environmental auditing, and discusses the meaning of the concept of environmental auditing, the responsibility for audits, and the methodology that should be followed when conducting audits. Available in English, French, German, and Spanish. Copies can be obtained from:

International Chamber of Commerce
The World Business Organization
38, cours Albert 1er
75008 Paris
France
(Telephone: 49 53 28 28)

SOURCES FROM THE NETHERLANDS

Gerardu, Jo J.A. October 1989. ***Experimental Projects Development Enforcement Chemical Waste Act.*** This 10-page document discusses the experimental projects in the Netherlands that were executed within the framework of the Multi-year Intensifying Programme Enforcement Chemical Waste Legislation. (*)

Gerardu, Jo J.A. September 1989. ***Enforcement Training***. This 6-page document provides an overview of training to improve enforcement in the Netherlands. Participants have included Ministry, provincial, and municipal officials, the police, and water quality controllers. (*)

van Ommen, Cees F. October 1989. ***Compliance Monitoring of National Environmental Legislation.*** This 10-page document discusses monitoring, by the Environmental Inspectorate of the Netherlands, of compliance with the Hazardous Waste Act, the Herbicides Act, and the Toxic Substances Act. Three kinds of monitoring are discussed: visual inspection, sampling, and a thorough audit-like inspection. (*)

Ministry of Housing, Physical Planning and the Environment, Chief Inspectorate for Environmental Hygiene, Main Department for Enforcement of Environmental Legislation. April 1989. ***Main Points of the Third Progress Report on Developments with Regard to the Enforcement of Environmental Legislation.*** This 24-page document summarizes the *Third Progress Report on the Development of Enforcement of Environmental Legislation*, presented to the Second Chamber of Parliament of the Netherlands in October 1988. Available in Dutch only. (*)

Ministry of Housing, Physical Planning and the Environment, Chief Inspectorate for Environmental Hygiene, Main Department for Enforcement of Environmental Legislation. April 1989. ***The Fourth Progress Report on Developments with Regard to the Enforcement of Environmental Legislation***. This document summarizes The *Fourth Progress Report of the Development of Enforcement of Environmental Legislation*, presented to the Second Chamber of Parliament of the Netherlands in August 1991. (*)

Lefevre, Hans E.C. October 1989. ***Continued Enforcement Intensification Programme (VHIP)***. This 6-page document discusses the so-called VHIP. In 1984 the government of the Netherlands began intensifying environmental law enforcement, starting with hazardous waste as a top priority. After several years the need was felt to extend enforcement priorities and activities to other sectors. The VHIP focuses on improving enforcement (through structuring, intensification, and integral multimedia approaches) and setting enforcement priorities. (*)

Lefevre, Hans E.C. September 1990. ***Enforcement of Environmental Regulations in the Netherlands***, in: *International Environmental Reporter*, volume 13, number 10, pages 401-408. This article reviews the development of the enforcement of environmental legislation in the Netherlands within the context of the present state of the country's environmental problems and policies, and the importance of enforcement in the regulatory chain. (*)

National Institute of Public Health and Environmental Protection. March 1989. ***Concern for Tomorrow, A National Environmental Survey, 1985-2010***. This 12-page document gives an overview of the national environmental situation in the Netherlands and an extrapolation to the year 2010. (**)

Ministry of Housing, Physical Planning and the Environment, May 1989. ***To Choose or to Lose: National Environmental Policy Plan***. This 258-page document describes the Netherlands' medium-term strategy for environmental policy. (***)

Ministry of Housing, Physical Planning and the Environment. May 1989. ***National Environmental Policy Plan Plus***. In conjunction with the National Environmental Policy Plan, this 107-page document sets forth the main lines of environmental policy for the 1990s: the strategy and objectives and, for the period 1990-1994, the measures which are to be taken to bring sustainable development within reach in the Netherlands. (***)

Copies can be obtained from:

(*) Netherlands Ministry of Housing, Physical Planning and the Environment
Chief Inspectorate for Environmental Hygiene
Main Department for Enforcement of Environmental Legislation
P.O. Box 450
2260 MB Leidschendam
The Netherlands
(Telephone: 31 70-3172618)

(**) National Institute of Public Health and Environmental Protection
P.O. Box 1
3720 BA Bilthoven
The Netherlands
(Telephone: 31 30-749111)

(***) Netherlands Ministry of Housing, Physical Planning and the Environment
Department for Information and International Relations
P.O. Box 20951
2500 EZ The Hague
The Netherlands

SOURCES FROM THE UNITED STATES

U.S. Environmental Protection Agency, Office of Enforcement. May 1984. ***Agencywide Compliance and Enforcement Strategy and Strategy Framework for EPA Compliance Programs***. This 50-page document establishes the U.S. EPA's strategic frameworks for improving environmental compliance and enforcement programs.

U.S. Environmental Protection Agency, Office of Enforcement. February 1991. ***Enforcement Four-Year Strategic Plan: Enhanced Environmental Enforcement for the 1990s***. 21E-2001. This 77-page document is the result of a collaborative effort between the U.S. EPA's Office of Enforcement and the Agency's media compliance programs. It provides a plan for

maintaining a strong and successful environmental enforcement program in the United States throughout the 1990s and into the next century.

U.S. Environmental Protection Agency, Office of Enforcement. February 1989. ***Basic Inspector Training Course: Fundamentals of Environmental Compliance Inspections.*** This lengthy text discusses the legal, technical, administrative, and communications aspects of performing inspection work for U.S. EPA-administered statutes. It is designed for use with a classroom training course.

U.S. Environmental Protection Agency. October 1990. ***RCRA Civil Penalty Policy.*** This 110-page paper discusses the methods that the U.S. EPA uses to assess civil penalties for environmental violations under the U.S. Resource Conservation and Recovery Act (RCRA). (Enforcement penalty policies and guidance for other U.S. EPA environmental programs are available and can be obtained from the address below.)

U.S. Environmental Protection Agency, Office of Enforcement. August 25, 1986. ***Revised Policy Framework for State/EPA Enforcement Agreements.*** This 46-page document outlines EPA's policy framework for implementing an enforcement relationship between the states and the federal government. It discusses implementing the framework through national program guidance and regional/state agreements.

U.S. Environmental Protection Agency, Office of Enforcement. February 25, 1991. ***Interim Policy on the Inclusion of Pollution Prevention and Recycling Provisions in Enforcement Settlements.*** This 12-page memorandum describes U.S. EPA's policy to encourage the use of pollution prevention and recycling in enforcement settlements.

U.S. Environmental Protection Agency, Office of Enforcement. February 12, 1991. ***Policy on the Use of Supplemental Environmental Projects in EPA Settlements.*** This 13-page memorandum describes the U.S. EPA's policy to include, in enforcement settlements, projects that remediate the adverse public health or environmental consequences of the violations at issue.

U.S. Environmental Protection Agency, Office of Enforcement. November 14, 198_. ***Final EPA Policy on the Inclusion of Environmental Auditing Provisions in Enforcement Settlements.*** This 68-page document provides guidance on selecting enforcement cases in which the U.S. EPA will seek to include environmental auditing provisions in the settlement terms. This document also includes U.S. EPA's Policy Statement on Environmental Auditing. (Other resource documents on environmental auditing are available from the U.S. EPA at the address below.)

U.S. Environmental Protection Agency, Office of Enforcement. November 1990. ***Summary Report: Enforcement Effectiveness Case Studies.*** This brief report provides additional information about case studies 4 and 5 described in Chapter 11 of this text.

U.S. Environmental Protection Agency, Office of Enforcement. September 1990. ***Environmental Criminal Enforcement: A Law Enforcement Officer's Guide.*** This 27-page booklet explains the structure of EPA's environmental law enforcement apparatus, as well as the methods of enforcement and how they function. It emphasizes the role of law enforcement officers in environmental enforcement.

U.S. Environmental Protection Agency, Office of Enforcement. March 1990. ***Environmental Enforcement: A Citizen's Guide.*** This 33-page booklet is similar to the *Law Enforcement Officers' Guide*, described above; however, this document emphasizes the citizen's role in environmental enforcement.

U.S. Environmental Protection Agency. 1990. ***Enforcement in the 1990s Project.*** This report presents the findings and recommendations from the U.S. EPA's Innovative Enforcement Work

Group. Innovative tools for environmental enforcement, such as environmental auditing, alternative dispute resolution, and risk-based pollution preventative enforcement are discussed.

U.S. Environmental Protection Agency, Office of Water. 19__. ***Guidance for Developing Control Authority Enforcement Response Plans.*** (Enforcement response policies and guidance for other U.S. EPA environmental programs are available and can be obtained from the address below.)

Wasserman, Cheryl E. 1992. ***Federal Enforcement: Theory and Practice.*** Pages 21-51 in: T.H. Tietenberg, ed., *Innovation in Environmental Policy: Economic and Legal Aspects of Recent Developments in Environmental Enforcement and Liability*. Part of Wallace E. Oates, ed., *New Horizons in Environmental Economics Series*, Edward Elgar Publishing Ltd., Grower House, Cross Road, Aldershot, Hampshire, England. This paper presents a review (in the context of environmental economics) of the theories that local, state, and federal regulators and law enforcement personnel use in implementing enforcement programs. The differences between theory and the reality of implementation practices also are discussed.

For a copy of the U.S. publications or for further information, write to:

Compliance and Policy Planning Branch
Office of Enforcement (LE-133)
U.S. Environmental Protection Agency
401 M. Street, SW
Washington, DC 20460
USA
(Telephone: 1 202 260 7550)

MEMBERSHIP IN THE EUROPEAN ECONOMIC COMMUNITY: WHAT IT MEANS FOR ENVIRONMENTAL REQUIREMENTS AND ENFORCEMENT

RICHARD MACRORY

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> "Community environmental legislation will only be effective if it is fully implemented and enforced by Member States"(1)

1 THE POLITICAL SIGNIFICANCE OF ENFORCEMENT

Political attitudes among Member States towards the implementation and enforcement of Community environmental legislation currently present a somewhat confusing and contradictory picture. In theory, the implementation of Community obligations should present no greater difficulties than those experienced with any set of national or regional laws. Community laws are not imposed "top-down" on unwilling or reluctant national governments. The governments of Member States continue to play the critical legislative role in agreeing to proposed Community legislation through the Council of Ministers, and nearly all Community legislation in the field of the environment to date has been agreed by unanimous voting by Member States. In legal theory, Community legislation, once agreed, is supreme over national law, and national courts and public administrations are obliged under Community law to resolve any discrepancies between national and Community law in favour of the latter, even to the extent of ignoring national law which is clearly incompatible (2). Yet it is clear that the implementation of Community environmental obligations within Member States falls well short of perfection. Increasingly in recent years the European Parliament (3) and the Council of Ministers have stressed the importance of ensuring that Community law is fully implemented within Member States(4). The Treaty of Rome provides for particular procedures aimed at ensuring full implementation by Member States of Community obligations which are described later in this paper, while the European Court of Justice has developed its own legal principles aimed at achieving greater integration of Community law into national legal systems. Various new institutional and procedural arrangements in the environmental field are now under active discussion at political level, pushed as much by individual Member States as by Community institutions. The motivation for these proposals cannot always be attributed purely to altruistic desires to secure environmental improvements within the Community - the perception (right or wrong) by one Member State that it is complying with Community law while others are not thus leading to possible competitive disadvantages provides a compelling motive to push for more effective arrangements to secure compliance throughout the Community.

Yet there are contradictions apparent at present. Member States may subscribe to the concept of the supremacy of Community law and the need for improved machinery to ensure implementation, but are often resistant if this implies interference with national administrative arrangements for enforcement. Community enforcement proceedings taken against Member States in some areas have been characterized as interfering with the "nooks and crannies" of decision-making at national level. The Danish referendum result on the Maastricht Treaty this year and the apparent incompatibility between those Member States who wish to speed up the expansion of the Community to include other European countries and those who aspire to a deeper union among existing Members is causing something of a re-assessment of the role of Community law and policy. Under the current Treaty the only explicit reference to "subsidiarity" as a principle upon which to delineate the boundaries of Community and national competence appears in those provisions dealing with the environment (5), while the proposed amendments under the Maastrict agreement would apply this principle to all areas of Community policy but in a stricter form (6). In recent months, the environment has been singled out in some circles as an area ripe for firmer application of this principle, and there has been discussion in political circles

by some Member States, aided apparently by some quarters of the European Commission, of the need to repeal a number of existing Community environmental laws, including those relating to drinking water standards and environmental assessment. Interestingly, these two examples are precisely areas where there have been some especially rigorous enforcement proceedings taken against Member States by the Commission.

2 THE NATURE OF COMMUNITY ENVIRONMENTAL LEGISLATION

The development of explicit Community environmental policies begun only in 1972 following the Stockholm Conference on the Environment, and the decision of the then Heads of Government of Member States that the Community must develop an environmental dimension. Since that time, a large body of Community laws and policies have been agreed (around 300 individual items), and in terms of the sheer amount of legislation that now exists the programme must be considered one of the success stories of the Community. Until amendments were made to the Treaty of Rome following the Single European Act, the Treaty possessed no specific provisions relating to the environment, and since all Community legislation must derive its authority from the Treaty pre-1987 environmental legislation was based either on Art 100 (approximation of national provisions directly affecting the common market) and/or Art 235 (residual power to take measures to achieve one of the objectives of the Community) (7). Despite the specific Articles relating to the environment inserted into the Treaty in 1987, the choice of legal basis for new measures continues to be a significant issue and a source of tension between the Commission and the Council of Ministers in certain areas, since there are now critical differences in the legislative process between measures based on Art. 130s (environment - unanimous voting at Council level) and Art 100A (approximation of provisions to achieve internal market - qualified majority at Council level) (8).

Community environmental laws cover a broad range of subject areas, and have employed a variety of distinct policy approaches. Detailed product standards are found in the field of air and noise pollution (vehicle emission standards, fuel standards, noise standards for motor vehicles, aircraft, construction plant etc.). Water pollution legislation has largely been based on three key approaches - minimum emission standards for discharges of certain dangerous substances and from specific types of work (e.g. municipal sewerage), environmental quality objectives for various categories of water and water use, and finally what is essentially a product standard for water intended for human consumption. Air pollution legislation has similarly been based on both air quality standards for certain substances (including sulphur dioxide, lead, and nitrogen dioxide) and the establishment of minimum emission standards for certain classes of industry (including new large combustion plant, and municipal incinerators). The 1988 Large Combustion Plant Directive (the result of a lengthy political struggle between Member States) contained an innovative approach dealing with emissions of sulphur dioxide and nitrogen dioxide from existing power stations and other large combustion plant. Member states resisted the Commission's initial favoured policy to introduce phased emission standards for such plant, and eventually the Directive was based on national "bubbles" with a commitment by Member States to reduce overall ceilings from 1980 levels in three phrases until 2003 - but using whatever means they considered best (e.g. retrofitting abatement technology, fuel change, etc.). Significantly, and unusually for an international agreement of this nature, the reductions to be achieved were not equal for all Member States - in recognition of the need to take due account "of the need for comparable effort, whilst making allowance for the specific situation of Member States" (9). In the field of waste disposal, a framework Directive, 75/442, established a broad requirement for the permitting of waste disposal facilities by Member States together with the production of waste disposal plans, but provided little in the way of detailed operational standards. In 1991 the Commission proposed a Directive which would provide minimum, detailed standards for the disposal of waste by landfill, though this has yet to be agreed, and has caused some controversy. Further Directives deal with procedures for the transfrontier shipment of wastes and disposal of named toxic wastes, and are essentially based on notification and manifestation requirements. In the field of chemicals, early Community legislation, going back to 1967, provided for classification,

packaging, and labelling requirements of dangerous substances, but in 1979 these provisions were supplemented by important new requirements requiring the detailed prior environmental testing and risk evaluation of new substances before they were placed on the market by manufacturers. Reciprocal recognition is provided for, in that manufacturers need follow the notification procedures in only one Member State before being guaranteed access to throughout the common market without the need for undergo further national testing procedures. This Directive applies only to new substances (i.e. those not on the market before 18/9/91) but in 1990 the Commission made proposals to extend the principles to pre-existing substances. The 1980's saw two important Directives dealing with environmental information - the 1985 Environmental Assessment Directive requiring specific assessment procedures to be carried out in connection with national authorization procedures for proposed projects falling within defined categories, and the 1982 "Seveso" Directive requiring on and off site emergency plan to be produced for specified hazardous industries. Wildlife protection has been the subject of a number of Directives, dealing both with the control of trade in endangered species, the control and regulation of hunting, and the protection of specific habitats for wildlife. An important new Directive on the protection of Community habitats in general has recently been agreed.

Recent initiatives have showed a greater reliance on new policy approaches in addition to the more conventional regulatory standard setting which underlay much of the early pollution legislation. For example, two important new fields are based on voluntary, market-based approaches rather than mandatory standards (the 1991 Eco-Labelling Regulations, and the proposed "Eco-Audit" Regulation). The success of these two initiatives rest on the assumption that industry will find the costs of compliance outweighed by the rewards of official Community endorsement in terms of marketing and corporate image. Citizen "empowerment" underlies the Freedom of Access to Environmental Information Directive 1990 (to be implemented by Member States in 1993), and the principles of civil liability for environmental damage are the subject of recent studies and policy initiatives. Some Community financial assistance towards environmental improvements has been available under various schemes and in specific areas, and the agreement in December 1991 to the principles of the Cohesion Fund and the Financial Instrument of the Environment (LIFE) implies a significant commitment to providing financial aid to Member States assist the implementation of Community environmental policies, including improving internal administrative machinery. Nevertheless, the "polluter pays" principle continues to represent a key underlying policy and was written into the environmental provisions of the Treaty following the Single European Act. Finally, the greater use of fiscal measures as a means of securing environmental policy aims is likely to form an important element of future initiatives in selected areas.

One of the underlying difficulties associated with the implementation and enforcement of Community environmental law is the differing structural character of much the legislation that has been agreed. For those Community laws dealing explicitly with standards for tradeable products (eg motor vehicles, paint), the pressures of the market and the more visible means of verifying compliance means that implementation does not appear to be a major issue. The main problem occurs with those Community policies which are dependent solely on national action taken within the confines of Member States, and do not involve products or services which are sold or traded across national boundaries. Examples would include the protection of groundwaters, the carrying out of environmental assessment procedures in connection with a construction project, or the prohibition of hunting of protected species of birds. These types of obligations, which form the majority of Community environmental measures, have generally take the form of Directives, implying that Member States are obliged to achieve the stated policy goals but are left with considerable administrative discretion as to how to achieve them. Even within this broad category,there are considerable differences in the nature of obligations placed on Member States which compound the problem of securing implementation. Some Directives prescribe explicit and precise goals that must be achieved in a given sector which in theory should be reasonably straightforward to monitor and enforce (10). Another class contains similarly precise goals in specific sectors or areas but leave a large element of discretion to Member States in determining where they are to apply (11). Examples of more recent legislation cut across conventional administrative boundaries and sectors, and impose obligations that reach deep into national

decision-making at many levels. This type of "horizontal" Directive, exemplified by the 1985 Environmental Assessment Directive (12), raises acute difficulties for both Member States and the Community institutions when it comes to ensuring full implementation.

3 THE ROLE OF THE COMMISSION AND ART. 169 PROCEDURES (13)

A key function of the European Commission under the Treaty of Rome is to ensure the effective application of Community law (14). The Commission's role in enforcement is therefore one of its institutional duties, but it was not until the early 1980's, a decade after the initiation of explicit Community environmental policies, that it began to take its role seriously in this field. The European Parliament played an important part in the process of galvanizing concern. The disappearance of toxic waste being transported from Seveso in 1983 revealed the extent of defective implementation of existing environmental Directives governing toxic and dangerous wastes, and the Parliament's subsequent inquiry and Resolution criticized both the Commission and Member States over their failure to ensure effective implementation of Community environmental legislation (15). Since that date, the Commission, largely through its legal unit within Directorate-General XI, has concentrated efforts on improving its enforcement efforts, using both conventional legal processes available under Community law, and less formal methods.

The formal legal procedures available to the Commission in persuading a Member State to comply with Community obligations derive from Article 169 of the Treaty, and as such are common to all areas of Community policy. The terms of Article 169 are interpreted to divide into three separate stages: (i) the sending of a formal Article 169 letter to the Member State (ii) the sending of a reasoned opinion and finally (iii) referral to the European Court. Each of these decisions requires a collective decision of the whole Commission, making it an elaborate process, but one that carries considerable political authority. The first two stages may, and often do, end in a settlement in that either the Member States complies with the Commission's requirements, or a mutually acceptable agreement is reached without the need for intervention by the Court. As might be expected of any complex process of legal enforcement, these formal stages, and particularly the service of an Article 169 letter are not normally initiated without some considerable forewarning and correspondence between the Member State concerned and the Commission.

Three main categories of non-implementation exist:

(1) A failure by a Member State to communicate to the Commission national laws and other national measures implementing the Community instruments in question; each Directives prescribe a time-limit (normally two or three years) by which date Member States must notify their national laws used or passed to implement the Directive.
(2) Incomplete or incorrect transposition of Community obligations into national law, implying that a Member State has communicated the text of national implementing measures but that these fail to reflect fully the obligations under the relevant Directive.
(3) The failure to apply the Community obligations in practice, whatever the state of the national law.

The first two categories are, by their nature, confined to the implementation of Directives, and are concerned with what might described as the formal aspect of implementation, ensuring at the very least that the "black letter" national law is in place. Monitoring the failure to communicate national measures within the time-scale specified in the Directive is a reasonable straightforward, and quasi- mechanical process ; either communication has been made by the specified date or it has not. In the early 1980s, the Commission standardized the enforcement machinery relating to non-communication across all sectors of Community law, and following advance warnings, if no notification has been made by the date required, the Commission will generally move straight into Art. 169 proceedings. The rise in the volume of legal proceedings for non-communication has been dramatic with in 1982 just 15 proceedings begun for non-communication in the environmental sector rising to 131 in 1990. Indeed in 1990, proceedings for non-communication represented almost 60% of the total commenced in the environmental sector. This represents a

higher proportion of the three classes of actions than for the previous three years, and may in part simply attributable to a higher volume of legislation agreed in previous years.

Determining an infringement of the second type, incomplete or incorrect transposition, is a task that is intellectually more demanding. Communication of national laws has taken place with the required time-limits but it is argued that they fail to reflect the obligations under the Directive in question. This requires both an understanding of the legal meaning of the provisions of the Directive, itself not always an easy matter, together with the ability and expertise to interpret the meaning of national legislation in the light of the Member State's own legal and administrative practice. The position is made more complex because Member States may have relied upon pre-existing legislation to meet the aims of the Directive in which case its detailed terminology is unlikely to be closely aligned with that of the Directive. Furthermore, some of more recent environmental Directives which cut across conventionally drawn boundaries of administrative and legal responsibility may as a result prevent the Member State from relying upon a single item of legislation as its means of implementation. Examples exist where a Member State has submitted something in the order of twenty items of national law to implement a single Directive, and in communicating the text of these measures to the Commission, a Member State is unlikely to mark for attention detailed and sometimes obscurely positioned deficiencies that may exist.

4 FAILURE TO IMPLEMENT IN PRACTICE

The need to ensure that laws are implemented in practice as well as in formal terms has been endorsed by Member States, and in recent years the Commission has been increasingly concerned with the failures of this category. This represents the most difficult and controversial area of enforcement for the Commission, and certainly one that can touch a raw nerve of the sensibilities of Member States who wish to preserve that national boundaries of discretion. Examples of this category include the failure of local drinking water supplies or particular stretches of bathing waters to meet prescribed Community standards, the failure of a waste disposal licence to meet the prohibitions contained in the Groundwater Directive, and failure to carry out an environmental assessment for a project falling within mandatory classes of the Environmental Assessment. This illustrates a further difficulty with this type of infringement proceedings. Assuming that the national legislation is in place, failure to implement in practice may well be due to the action or inaction of a local or regional public authority, or even a local court. All such bodies fall within the overarching concept of the "Member State", yet in practice it is the central Governments of Member State who must assume the responsibility for being at the receiving end of infringement proceedings, though in some countries, depending on the degree of decentralization that exists (and which varies considerably within the Community) they will possess very little legal influence over the way that internal administrative bodies behave. The theory and practice of Community law enforcement largely ignores these complexities at present.

One reason that may underlie the failure of a Member State to implement Directives in practice may simply be a question of economic costs. Some environmental directives expressly incorporate an economic criterion such as "best available technology not entailing excessive costs",(16) but others do not. An important case before the European Court of Justice in 1990 concerned the failure to implement the standards contained in the Drinking Water Directive (17) in local supplies, and the Court held that the practical and economic difficulties of ensuring that water supplies met the required standards provided no defence to a Member State charged with failure to implement the Directive (18). This decision illustrates the very strict approach that the European Court has generally shown in issues of non-implementation, though it must be stressed that at present the European Court possesses no powers of sanction, relying instead upon its moral authority if its judgments are to be complied with by Member States. The political response to a apparently disturbing increase in examples of Member States failing to comply with judgments of the Court is contained in the Maastricht Treaty which proposes to give power to the Court to fine Member States which do not comply with a judgment.

5 INFORMATION GAPS AND THE COMPLAINT PROCEDURE

In the environmental sector, the Commission has no real powers of investigation comparable in any way to those it has been possesses in the competition field (19). There are as yet no Community environmental inspectors,although the idea has been suggested in the past, and in 1991 the UK Government called for the setting up of a Community "audit" inspectorate to work alongside and monitor the performance of existing national inspectorates. In 1990, the Council of Ministers agreed a Regulation establishing a European Environmental Agency, though as yet no location for the Agency has been agreed due to political disputes between Member States (20), and initially at any rate the functions of the Agency would be largely confined to data collection and analysis in conjunction with similar bodies within Member States. Against this background, the Commission has been peculiarly dependent on its own complaint system to enable it to be alerted to possible infringements in practice. The procedures, governed by the Commission's internal rules of administration, permit any member of the public, including environmental groups and industries, to notify the Commission of alleged infringements. No legal interest in the matter complained of need be shown, and no costs are involved.

The system is common to all areas of Community law, and was first developed in the 1960's in the context of the internal market. But it is the environmental field that have given rise to a spectacular growth in the numbers of complaints received, and they now represent almost half of all total number received annually by the Commission. A number of criticisms can be made about the current system. It means that the Commission is initially at any rate playing a largely reactive role to the type of issues and subject matter raised, and its stated commitment to investigate every complaint received, while a laudable goal of an administration exercising enforcement powers, leaves little room for strategic decision-making, especially given the current limited man-power involved (21). Various suggestions have been made to improve the efficiency of the system, including the establishment of Commission offices within Member States to act as a first point of referral, or the requirement that complaints are initially made and filtered through Members of the European Parliament. Yet the ability and right of citizens to by-pass national governments and bodies and make representations direct to a supra-national enforcement body marks a bold institutional initiative, particularly for those countries where access to domestic courts and tribunals is not simple, or where traditions in open and responsive administrations are not well developed. Certainly, in its recent study of the implementation and enforcement of Community legislation, the UK House of Lords Select Committee recommended against introducing radical new filter or other similar mechanisms:

> "...the complaints procedure remains a vital means for individual citizens to bring pressure on regulatory authorities to comply with Community law. The sheer numbers of complaints made and of consequent referrals to the Court of Justice are sufficient testament to the need for such a mechanism." (22)

The Committee went on to suggest a number of administrative reforms to improve the handling of complaint investigations, including increased staffing level within DGXI, a clearer sense of priorities, greater powers of direct inspection, speeding up of decision-making, and more openness in the procedures -the initial stages, at least until the sending of a Reasoned Opinion, are still dominated by conventions of confidentiality associated with international diplomacy. Despite the criticisms, it is clear that in a number of sectors the Commission's activities have created considerable pressure on the governments of Member States, and non-governmental organizations have become adept at using the procedures in a sophisticated manner, though experience in this respect still varies considerably between Member States. In 1990 the Commission took the bold step of releasing publicly figures on a country by country basis of the numbers of Article 169 letters that had been issued in the environmental sector, a deliberate political move to highlight the issue of implementation and one that caused considerable disquiet among some Member States at the time. An annual report is now promised from the Commission.

6 INTERNALIZING COMMUNITY OBLIGATIONS - DOCTRINES OF THE EUROPEAN COURT OF JUSTICE

Although a primary function of the European Court of Justice is to determine the meaning of Community legislation, it has never confined itself to a role of mechanical interpretation, but has over the years developed independent legal principles in an effort to ensure the supremacy of Community law and its effective application by national courts. Two key doctrines can be mentioned in the context of implementation, though it should be emphasised that these were not developed with environmental policies in mind but are applicable to all areas of Community law. The first, developed in the mid-1970's at a time when national governments appeared to have lost some momentum in developing the Community, concerned Directives. Under this doctrine, the Court held that, even in the absence of national implementing legislation or where such legislation was defective, the sole legal remedy should not lie in Article 169 proceedings brought by the Commission. For those obligations under Directives which could be described as precise and certain, individual citizens should be entitled to rely upon them in proceedings before national courts. But there was an important limitation in that such proceedings must involve governments or other "emanations of the State", a broad concept that encompasses local government bodies, public agencies, and many other bodies considered to be under the control of the State. The rationale which has limited the application of the doctrine to the public rather than the private sector is that it is the Member State which has failed to implement Community law, and it is therefore the Member State (and all that this concept entails) which should not be entitled to benefit from their own failings. In the environmental field it is still quite rare for the doctrine to be raised before national courts, though in some countries, notably the Netherlands, there are now a fair number of reported cases on the subject.

The second doctrine which has been developed by the Court and sometimes known as the doctrine of sympathetic interpretation requires national courts to interpret as far as possible national laws in such a way as to be consistent with Community obligations, including Directives. This doctrine can be raised in any proceedings, whether or not involving emanations of the State, though again its application in the environmental sector does not yet appear wide-spread. Both these doctrines can be seen as a mechanism to internalize Community obligations even where the government of a Member State has failed to implement, and as the Court's own contribution towards the issue. The doctrines are not intended to supplant the Art. 169 proceedings, and it is irrelevant to their application that the Commission may also be bringing Art. 169 proceedings on the same point. While in theory extremely powerful mechanisms, their practical effectiveness depends crucially on a number of factors. First, the acceptance by national courts and judges of their own obligation to apply the doctrines, even in the face of conflicting national law, and this is by no means guaranteed in all countries, or at all levels of court. Second, citizens or others whose environmental interests are threatened must have the legal right to raise such issues before their national courts, and again the picture throughout the Community is by no means consistent. Substantive rules on standing, particularly as they relate to non-governmental organizations, differ in many countries, as too do the costs of bringing actions, and the expertise of lawyers in what is still seen within some Member States as a specialized and somewhat esoteric field of law.

7 SANCTIONS AND REMEDIES

As a matter of general principle, Community legislation has not normally prescribed forms of sanction whether criminal or civil which Member States must implement in order to ensure that Community policy is achieved. Most environmental legislation to date has taken the form of Directives which, as described above, may contain obligations involving product standards, environmental standards of various sorts, licensing and procedural requirements, and while Member States have an obligation under Community law to achieve the aims of Directives, they retain a discretion to determine the appropriate national legal and administrative means which will be necessary to ensure these goals are attained. Whether they employ criminal sanctions, strict

or fault based liability offences, civil remedies, or administrative measures is left to their discretion, and the traditions of their own legal and administrative culture.

While the European Court of Justice has developed doctrines creating protective rights for individuals, notably the direct effective doctrine, they have to date largely left matters of procedural remedies, including the question of standing, to national courts:

> "It is for the national courts in application of the principle of cooperation laid down in Article 5 of the EEC Treaty to ensure the legal protection which persons derive from the direct effect of provisions of Community law."
>
> R v Sec. of State for Transport ex p Factortame and Others C-213/89 1991 1 AC 603

Nevertheless, according to case-law (23) of the European Court the discretion of national courts and legislation in this context is subject to two limitations:

- procedural conditions relating to rights under Community law must not be less favourable than conditions relating to equivalent procedures for national remedies;
- such national conditions must not make it impossible to exercise those rights derived from Community law.

As to sanctions or remedies introduced under national law, the European Court of Justice has hinted in at least one case that while Member States may have considerable discretion, they cannot abuse this. For example, where a Member State had a discretion to choose a sanction under a Directive and chose an award of compensation,

> "..then in order to ensure that it is effective in relation to the damage suffered and that it has a deterrent effect, that compensation must in any event be adequate in relation to the damage sustained."
>
> Case 14/83 Van Colson (1984) ECR 1891

The implications of this doctrine in likely to tested before the British courts in the context of current legal proceedings taken by Friends of the Earth against the Secretary of State for the Environment, challenging the validity of undertakings accepted by him from private sector water undertakers who had failed to comply with existing Community standards on Drinking Water. It is likely to be argued that in the context of Community principles, such undertakings (which essentially represent a form of agreement to upgrade standards over a time period but one which is on the public record and can ultimately be enforced by administrative remedies leading to the removal of the undertaker's licence to provide water supplies) are not a sufficiently rigorous form of sanction to ensure compliance.

Finally, in the Frankovitch decision last year (Frankovitch v Italian Republic, Case C-6/90,C-9/90 Times European Law Report), the European Court held that in certain circumstances a remedy in damages to individuals should be available against Governments where loss had resulted due to their failure to implement an EC Directive. The Court held that if no such system existed under national courts it was up to the courts to create such remedies. Again, this can be seen as an example of the Court trying to introduce legal remedies into national systems which ultimately aim to bring pressure on national governments to comply with Community obligations. As the Court stated in its judgment,

> **"The full effectiveness of Community rules might be called into question and the protection of the rights which they conferred would be weakened if individuals could not obtain compensation where their rights were infringed by a breach of Community law for which a Member State is responsible"**

8 IMPACT AND APPLICATION OF COMMUNITY ENVIRONMENTAL LAW ON MEMBER STATES

Judging the impact of Community environmental laws within Member States is not an easy exercise. One is faced with twelve different countries, often with quite distinct national legal and administrative cultures, and with distinctive experiences in the development of national environmental law. A simple dichotomy between those countries with a Roman law tradition and those with a common law system (the UK and Ireland) does not do justice to the range of differences that exist, and national experts in each country could point to a wide range of different impacts which Community environmental law has had on their own national systems. The position is made more complex because Community laws do not originate from a straightforward "top-down" political process, but may often be influenced by existing developments in particular Member States, and during negotiations amendments may be sought seeking to minimize the disruptive effect of proposed new Community provisions on existing national procedures. This means that for some countries, a particular Directive may have little impact on its national laws while the same Directive may be a significant innovation for other countries.

The conventional wisdom is that for those Member States which already possessed a reasonably developed set of environmental laws prior to the development of Community environmental law (eg Germany, Denmark, Netherlands, the United Kingdom, and France), the Community dimension has not brought about major changes, while the most dramatic effects have been felt in those countries with little in the way of sophisticated national controls (e.g. Spain, Portugal, Greece, Italy). There is some truth in this, but on closer examination, the "North-South" division is not wholly convincing. To take one example, before the introduction of Community legislation prescribing air quality standards, the only country in the Community which possessed legally binding air quality standards was what was then the Federal Republic of Germany. The introduction of legal air quality standards in countries such as Denmark, France, and the Netherlands and the United Kingdom, can be directly attributable to the need to comply with Community legislation (24). Certainly, for a United Kingdom lawyer in both the field of air pollution and other areas of Community environmental law, a major structural influence of Community law has been the extent to which it has proved necessary to formalize into legislation and regulations detailed environmental standards - a complete reversal of what had hitherto been the dominant practice of allowing a large degree of administrative discretion within a broadly drafted legal framework, coupled with a reliance upon administrative circulars to transmit detailed policy intentions (25). This in turn is influencing the way that internal interests, including regulators, lawyers, and industry, are approaching the subject of environmental policy in the United Kingdom.

Two concluding general points can be made on the subject of implementation. First, full and effective implementation of Community law is unlikely ever to be achieved solely by the institutional mechanisms implicit in the Article 169 procedure, involving both the Commission and the European Court. In the long run, it requires a genuine internal political will by Member States to ensure that Community policies are implemented within their countries, and this in turn will require improved education and understanding by national officials of the nature of Community law, together with the development of more effective national fora allowing oversight of decision-making.

Second, judging both the effectiveness of Community policies in improvement environmental protection and the extent and nature of deficiencies that exist requires much greater investment in reliable and comparable environmental data sources. As the UK House of Lords Report (22) put it: "Without information it is impossible to assess whether compliance has taken place, the effectiveness of the legislation, or to guage what further action needs to be taken"(para 34). In this context, the continued failure of Member States to agree a location for the proposed Community Environmental Agency is a unfortunate reflection on the extent to which national political interests can override those of the environment. The speed and manner in which this issue is resolved will provide some signal of the extent to which Member States are truly committed to improving implemention of Community environmental policies.

REFERENCES

(1) Statement of European Council, Bulletin of the European Communities 6-1990, 18-21, note 4.

(2) This principle may even extend to a national court granting interim relief to suspend the operation of a piece of national legislation until full proceedings take place : Case 246/89 R v Secretary of State for Transport ex parte Factortame (1989) ECR 312.

(3) see, for example, Resolutions of the European Parliament of 11/4/84 OJ 1984 C 127/67, and of 19/3/90, OJ 1990 C 68/172.

(4) At an informal meeting of the Council of Ministers on 11-13 October 1991, it was agreed that there was a need for both the "further development and enforcement of environmental legislation" within the Community and a need to "improve the compliance and enforcement structures concerning environmental legislation and its implementation within the Member States." The Council accepted, as one contribution to this process, recommendations contained in a report by Environmental Resources Ltd of the need to establish an informal network of national enforcement agencies responsible for the practical implementation of Community environmental policies.

(5) Art 130r(4): "The Community shall take action relating to the environment to the extent to which the objectives referred to in paragraph 1 (of this Article) can be attained better at Community level than at the level of the individual Member States."

(6) Proposed new Art. 3b: "In areas which do not fall within its exclusive competence the Community shall take action, in accordance with the principal of subsidiarity, only if and in so far as the objectives of the proposed action cannot sufficiently be achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community."

(7) The vast majority of environmental Directives were based on both Articles. Directive 79/409/EEC on the Conservation of Wild Birds is one of the few measures of substance solely based on Art. 235.

(8) Although the Maastricht Treaty amendments would introduce qualified majority voting for most environmental measures, the legislative procedures for Art 100A remain different, making the distinction still one of importance. Furthermore, the freedom for a Member State to introduce stricter national environmental controls is more restricted where the Community measure is based on Art 100A. In Commission v Council, Case 300/89, (June 11 1991), the European Court held that given the distinctive legislative processes, measures had to be based on one or the other Articles, but that this choice was not a matter of discretion by Community institutions but was a legal question to be based on "objective elements". In that case, the ECJ agreed with the Commission's contention that a measure harmonizing pollution standards in a particular industrial sector was, despite a strong environmental component, still correctly based on Art. 100A.

(9) Preamble, Council Directive of 24 November 1988, 88/609/EEC.

(10) for example, Directive 80/779 on air quality limit values and guide values for sulphur dioxide and suspended particulates; Directive 80/778 relating to the quality of water intended for human consumption.

(11) for example, Directive 78/659 on the quality of waters for fish life; Directive 76/160 on the quality of bathing waters; Directive 79/409 on the conservation of wild birds.

(12) Directive 85/337 on the assessment of the effects of certain public and private projects on the environment. Directive 90/313 on access to environmental information is another good example of a "horizontal" measure.

(13) The material for this section is drawn from a more detailed analysis in Macrory (1992) "The Enforcement of Community Environmental Laws : Some Critical Legal Issues." Common Market Law Review 29, 347-369.

(14) Art 155 of the Treaty provides that the Commission shall "..ensure that the provisions of this Treaty and the measures taken by the institutions pursuant thereof are applied;"

(15) European Parliament Resolution of 11 April 1984 OJ 1984 C 127/67.

(16) see Directive 84/360 on combatting of air pollution from large industrial plants.

(17) Directive 80/778 relating to the quality of water intended for human consumption.

(18) Case 42/89 Commission v Belgium, 5 July 1990.

(19) see Council Regulation No 17 of 6 February 1962, OJ Special Edition 1959-62, 87

(20) Regulation 1210/90 OJ 1990 L 120/1. The European Parliament wished to give the Agency a more explicit inspection and enforcement function, but this was resisted by the Council. Art 20, however, provides that two years after the location of the Agency has been agreed, the Council must decide upon further tasks for the Agency including, "associating in the monitoring of the implementation of Community environmental legislation in cooperation with the Commission and existing competent bodies in the Member States."

(21) In 1991, the legal unit within DG XI had a staff of 10 lawyers, six of whom were on temporary secondment.

(22) House of Lords Select Committee on the European Communities, 9th Report, Session 1991-92, March 1992, para 128.

(23) see Geddes "Locus standi and EEC Environmental Measures." Journal of Environmental Law Vol 4 No 1 1992.

(24) see Institute for European Environmental Policy (1989) Report for the European Commission , "The Implementation of the EEC Air Directives in the Twelve Member States." The Institute has conducted a large number of valuable country by country and comparative studies of the impact of Community environmental legislation within Member States.

(25) Although some would argue that this is a characteristic of a common law country adapting to Roman law systems, the same formalizing influence of Community law can be seen in countries such as France ; see Annex to the 8th Report to the European Parliament on monitoring the application of Community law 1991, OJ C 338, 31.12.91.

THE IMPLEMENTATION OF ENVIRONMENTAL LAWS BY THE EUROPEAN ECONOMIC COMMUNITIES

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REFERENCE

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I. Introduction

Alexandre Kiss, probably the most renowned European environmental lawyer, concludes his book *Droit international de l'environnement* with the following statement on the implementation of European Economic Communities (EEC) environmental law:

> It is encouraging to be able to end a book on international environmental law with a description of a legislative and judicial system which presents so many guarantees of efficiency. Certainly, one might object that Community law forms already no longer a part of international law, since the EEC has set up a quasi-federal system. This objection is not without value; however, is the future of international law not progressing towards federal forms? Environmental law which reveals so many strong and weak points of legal systems, gives, also in this regard, substance for reflection.[1]

Along the same line of thinking, the International Environmental Law Conference (from 12 to 16 August 1990 in The Hague) which was organised by the International Union for Conservation of Nature and Natural Resources (IUCN) discussed, among other subjects, whether EEC implementation and enforcement procedures could form some sort of a model for the regional or global implementation and enforcement of international conventions.

The importance of EEC implementation rules is also underlined by a number of statements and resolutions which EEC institutions have adopted during the last few years. Thus, the Council Resolution adopting the Community's Fourth Action Programme on the Environment stressed that the Council attaches particular importance to the implementation of Community legislation, and called on the Commission to provide regular reports on the subject so that the Council and the European Parliament could assess the effectiveness of the Community's environmental policy.[2] The European Parliament in turn has adopted a series of Resolutions concerning the implementation of the Community rules on the

[1] *Alexandre Kiss*, Droit international de l'environnement, Paris 1989, 336.

[2] European Council, Resolution of 19 October 1987, Official Journal of the European Communities (OJEC) 1987, No C 328/1.

environment.[3] In Dublin on 25-26 June 1990 the European Council stressed the importance of full implementation and enforcement of Community legislation and instructed the Commission to conduct regular reviews and publish detailed reports on its findings.[4] Since environmental problems are of growing concern all over the world and in view of the upcoming United Nations environmental conference in 1992 in Brazil, it seems useful to describe in some detail EEC implementation rules for environmental standards and the way they function in practice.

II. The Framework Set by EEC Law

The EEC, a "Regional Economic Integration Organisation" that undertakes to integrate twelve sovereign nation-states into one European Community, has over approximately twenty years of environmental policy adopted some 200 binding pieces of law, in the form of EEC directives, regulations or decisions. These rules of law are adopted by the Council, which acts upon proposals from the Commission and with the participation of the European Parliament. Legal review is exercised by the Court of Justice.

"Community environmental legislation will only be effective if it is fully implemented and enforced by Member States".[5] At present, the overall situation within the EEC is characterised by the late transposal of directives into national law, rather frequent legal deficiencies in national legislative implementation and, in particular, deficiencies in the practical enforcement of rules on implementation of Community law which were fixed at the national level. EEC law is not present in national law; local, regional and national administrations are often not familiar with it. Its relationship with national rules — direct effect doctrine, superiority of Community law, significance of the texts of this or that Community rule — are ignored. In conflicts with economic developments, environmental aspects almost always are given second place. Thus it looks as if all combined rules of Community and national environmental law, adopted over twenty years, have not managed significantly or generally to reverse the trend of the slow but continued degradation of the environment within the EEC.

The key Articles as regards the implementation of EEC environmental measures are Articles 130 r (4) and 155 of the EEC Treaty. Article 130 r (4) states with regard to environmental measures:

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[3] Resolution of 10 March 1988 (air and water), OJEC 1988, No C 94/151 and 155; Resolution of 12 October 1988 (nature), OJEC 1988, No C 290/54; Resolution of 13 October 1988 (birds), OJEC 1988, No C 290/137; Resolution of 16 February 1990 (general), OJEC 1990, No C 68/183.

[4] European Council, Bulletin of the European Communities 6/1990, 18-21.

[5] European Council (note 4), 19.

Without prejudice to certain measures of a Community nature, the Member States shall finance and implement the other measures.

Article 155 states:

In order to ensure the proper functioning and development of the common market, the Commission shall:

— ensure that the provisions of this Treaty and the measures taken by the institutions pursuant thereto are applied; ...

It is generally accepted that Article 155 is not linked to "common market" requirements, but institutes the Commission as guardian of the Treaty in general.

Accordingly, the Commission's work not only prepares environmental legislation or conceives and pursues an EEC environmental policy, but it also is obliged under the Treaty to ensure that all obligations imposed on Member States by Community environmental legislation are honoured.

Thus, Member States not only have to adopt the measures necessary to incorporate Community environmental legislation into their national laws, but also have to apply them fully and correctly over all their territory.

The Court of Justice has ruled that the preservation of the environment is an essential objective in the interest of the Community as a whole.[6] The unique feature of environmental legislation, which distinguishes it from Community legislation in other areas, is that it depends almost exclusively on the goodwill of the national administrations to implement it. More specifically, Community legislation on economic affairs, agriculture, competition, transport, or services directly affects the vital interests of key sectors of economic activity in each Member State. Therefore, special interest groups are quick to mobilise all the legal, political or media resources at their disposal to enforce the Community legislation protecting them or combating practices detrimental to them. In contrast to that, the environment belongs to no one in particular ("the Community as a whole") and therefore has no official defender. Virtually nobody can combine the know-how, means, resources and qualifications needed to protect a biotope, clean up a river or save a forest. Apart from sporadic action by environmental groups, most of whom are poorly equipped, it is left to the authorities to control activities which could potentially damage the environment, and to accept or reject infrastructure projects with a definite environmental impact or to keep track of the movement of dangerous substances or waste. In practice, they are responsible for enforcing the regulations implementing Community legislation and for bringing proceedings against polluters. Administrations alone can collect, organize and, where appropriate, publish data on emissions into the soil, air or water, environmental pollution, environmental hazards, the diversity of flora and fauna or the state of the environment in general.

[6] Court of Justice, Case 240/83, ADBHU, (1985) European Court Reports (ECR) 531; Case 302/86, Commission v. Denmark, (1988) ECR 4607.

The fact that protection of the environment, an objective in the general interest of the Community, is left almost entirely to the authorities singles out environmental legislation and, hence, the arrangements for monitoring the implementation of this law, as being different from all other areas of Community legislation. This difference goes a long way towards explaining the growing interest in monitoring in recent years and the importance attached to it by the Member States, the Community institutions, the media and public opinion — an importance which, in all probability, will grow stronger still in the future.

Environmental directives have been adopted at the Community level since 1975. Control of implementation during the first years following that date was focused on the question of whether any national legislation was adopted in order to transpose the directive into national law. The main push to increase implementation control was given by the European Parliament.

In 1983 some barrels containing highly toxic waste from the Seveso (Italy)-accident in 1978 suddenly disappeared while being transported. The incident caused enormous public concern in almost all EEC Member States. The European Parliament, for the first time in its history, instituted an enquiry Committee which was to examine the implementation of EEC environmental legislation and in particular Council Directive 78/319 on toxic and dangerous waste.[7] The final report of the Committee and Parliament's resolution on the question were highly critical of the Commission and the Member States and called for effective measures in order to improve the implementation of environmental legislation by Member States and control by the Commission.[8] This led the Commission to increase its activities in monitoring the implementation of EEC environmental law by Member States.

III. Monitoring Procedures

The Commission has a variety of instruments for enforcing Community environmental law, with the infringement procedure provided for in Article 169 of the Treaty as the last resort when all else fails.

The first point to remember is that wide consultations are held with the Member States before the Council adopts a Directive or Regulation. As soon as the Commission starts work on a subject, it discusses its plans with the national experts appointed by the Member States and the economic or political circles concerned. Since environmental legislation is adopted by the Council — and in most cases by unanimous vote — it is fair to assume that all the Member States are fully aware of the commitments they are making.

[7] Directive 78/319 on toxic and dangerous waste, OJEC 1978, No 84/43.

[8] European Parliament Resolution of 11 April 1984, OJEC 1984, No C 127/67.

When a Directive is adopted, the Commission sends a formal letter to each Member State, referring to the Directive, the deadlines laid down in it and the need to adapt national law to the requirements of Community law. Some three months before the deadline for incorporating the Directive into national law, the Commission again sends a formal letter to those Member States which have not notified the Commission of such incorporation. In this letter the Commission once again explains the legal position and points out the Member States' obligations to comply with the provisions of the Directive.

Such letters are sent in connection with each Directive adopted. The convening of meetings of experts or representatives of the Member States before or after a Directive has come into force is less systematic. While meetings take place regularly in connection with such fields as chemicals, atmospheric pollution and flora and fauna, and the opportunity at least exists of discussing jointly within the Waste Management Committee[9] the implementation of the Directives on waste in the Member States, meetings related to water and noise pollution tend to be few and far between.

Alongside meetings with representatives of the Member States, the Commission carries out its own investigations into the execution and application of Community environmental regulations and assesses its findings. In this context there are numerous formal or informal, written or personal contacts between Commission departments and the national authorities responsible for putting the Directives into effect. Finally, mention should be made of Community Decisions, which provide for an exchange of specific environmental information.[10] There are likewise regular meetings in connection with these Decisions, at which the application of environmental legislation is discussed.

Occasionally the Commission conducts informal appraisals of draft legislation submitted by the Member States before definitive adoption. Although the Commission can give no definite opinion on implementing measures at the draft stage, it attempts to help the Member States at their request.

Finally, in 1990 the Commission started to organize bilateral "package" meetings with the national authorities to discuss the facts of the case or legal aspects of alleged infringements, complaints or measures to implement the Directives on the environment with all the central, regional or local authorities concerned. Meetings of this type have been held in Spain (twice), Portugal, Greece (twice), Germany, Belgium, Ireland and the Netherlands.

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[9] The Committee was set up in 1976 and has the mandate to discuss all matters of waste management in the EEC, OJEC 1976, No L 115/73.

[10] Decision 82/459 (air pollution), OJEC 1982, No L 210/1; Decision 77/585 (water), OJEC 1987, No L 240/1.

Consequently, the formal procedure laid down in Article 169 of the EEC Treaty is the Commissions's last resort for exercising control and enforcing Community law on the environment.

Article 169 reads as follows:

> If the Commission considers that a Member State has failed to fulfil an obligation under this Treaty, it shall deliver a reasoned opinion on the matter after giving the State concerned the opportunity to submit its observations.
>
> If the State concerned does not comply with the opinion within the period laid down by the Commission, the latter may bring the matter before the Court of Justice.

Thus, there is a three-stage procedure under that Article:

(i) formal notice to the Member State concerned

(ii) reasoned opinion

(iii) referral to the Court of Justice.

The following figures may illustrate the evolution of these procedures during the last years.[11]

Year	Letter of formal notice	Reasoned opinion	Referral to the Court of Justice
1981	27	3	12
1982	16	7	-
1983	35	1	-
1984	65	33	2
1985	69	26	23
1986	134	11	10
1987	159	24	3
1988	93	71	11
1989	101	26	21
1990	168	39	14

The letter of formal notice from the Commission does not follow a specific pattern, though it has by now acquired a more or less standard content. This is, in part, due to the view held by the Court of Justice that the Commission's letter has already defined the object at issue in any subsequent court proceedings. The Commission is thus unable to include any additional points of complaint in its reasoned opinion or when bringing the matter before the Court of Justice, even if the Commission has itself discovered the infringement by the Member State.

[11] Commission, 7th annual report to the European Parliament on the control of implementation of Community law — 1989, OJEC 1990, No C 232/35; the figures for 1990 have not yet been published.

The rules allow the Member State in question two months in which to reply to the Commission's letter of formal notice. However, since — on average — the Commission discusses and decides on an Article 169 procedure only once every six months, the time available to Member States to reply is almost always much longer.

The Commission's reasoned opinion closes the administrative part of the procedure. The facts of the case have been clarified and the Member State informed of the Commission's definitive stand on the legal issue involved. The opinion gives a detailed account of how Community law has been infringed. Should proceedings subsequently be initiated with the Court of Justice, the facts no longer need to be clarified; the dispute can be confined to legal issues.

A judgment by the Court of Justice pursuant to Article 169 establishes an infringement of Community law provisions, unless the Commission's complaint is dismissed. What conclusions the Member State draws from the judgment and how it complies with the Court's ruling is left to that Member State. At all events, non-compliance with the Court's rulings on environmental issues is not frequent.

All three stages of Article 169 require an explicit, formal decision by the Commission itself, based on a proposal from the departments concerned. In 1990, the Commission delegated to the Member responsible for the environment the power to decide whether to initiate the procedure whenever no details are received on the national measures taken to implement a particular Directive. In view of the rather formalised procedures, it always takes a considerable amount of time from the start of the Article 169 procedure to the eventual Court judgment. For instance, it took 52 months from the date that notice was served to obtain a ruling from the Court in Cases 339/87 (Commission v Netherlands) and 42/89 (Commission v France) and 47 months in Case 182/89 (Commission v Belgium). As the number of cases before the Court and dossiers handled by the Commission increases, the procedure may take longer still.

One way to speed up the procedure is to start "urgency procedures", in other words to shorten the gap between the formal decision and its implementation and the time which the Member States are allowed to send in their replies. However, for lack of staff and objective criteria for selecting the right dossiers, such urgency procedures are rather exceptional. Thus, in 1990, the Commission exercised this right only once, against Belgium's provisions explicitly authorizing an exemption from Directive 80/51 on aircraft noise.

The Commission is not empowered to take interim measures against individual Member States. It is only when a case has been brought before the Court that it can request the Court to impose a provisional injunction if it fears that irreversible damage could be caused pending the final ruling. In the only case decided so far, Case 57/89 against Germany, the Commission asked for a temporary injunction to stop work which threatened the habitat of wild birds. The Court rejected this

request on the grounds that the Commission had failed to establish the urgency of the need to stop the work.[12]

IV. Aspects Monitored

Three aspects of implementation of Community environmental law are monitored. The Commission checks whether:

(1) the Member States have adopted and submitted their national measures to implement the Directives;

(2) these national measures fully and correctly discharge the obligations imposed by Community law;

(3) these national implementing provisions are applied correctly in practice.

The following figures show the developments since 1981, though the repartition is not always altogether clear:[13]

Letters of Formal Notice Sent to Member States

Year	Non-communication of national implementation measures	Incomplete or incorrect transposal of EEC law into national law	Bad implementation of transposed legislation
1981	27	-	-
1982	15	1	-
1983	23	10	2
1984	48	15	2
1985	58	10	1
1986	84	32	9
1987	68	30	58
1988	36	24	30
1989	46	17	37
1990	131	24	62

[12] Court of Justice, Case 57/89 (1989), ECR 2849.

[13] Commission (note 6); the figures for 1990 have not yet been published. Discrepancies from the figures on page 14 come from the unpublished Commission document.

1. Failure to Give Notification of Implementing Measures

Community Directives contain a provision to the effect that Member States must adapt their national legislation to the provisions of the Directive within a specific time period and give notification of these implementing measures to the Commission.

Even without such a provision, this obligation for the Member States arises in any case from Article 5 of the Treaty, to which we have already referred. When this specified period has expired without the Commission having received notification of the required implementing measures, the Commission decides without further ado to initiate a procedure under Article 169. This is justified by the fact that the Member States have twice been formally reminded of their obligations during the period of grace, that these obligations are clearly and unequivocally set out in the Directive, and that past experience has shown that incorporation into national law of environmental Directives within the fixed time-period is the exception rather than the rule.

As a general rule, these non-notification procedures reflect a certain slowness on the part of the Member States to implement new Directives rather than any deliberate attempt to evade their obligations to the Community. The Member States often step into line shortly after the Directive enters into force. As a result, the Court rarely has to give a ruling. Nonetheless, there are still too many cases of failure to inform the Commission of the measures taken, giving rise to proceedings and costs which could be avoided.

The letters of formal notice sent to the Member States regarding failure to notify are of a purely formal nature. If notification is subsequently received from a Member State, the Article 169 procedure has to be shelved. If necessary, a new procedure on the grounds of incomplete implementation may be initiated, a most intricate process.

If a Member State notifies the Commission that, in its view, its national law already meets the requirements of the Directive, this is regarded as a formal notification and the Commission examines the national legislation to see whether the Member State's claim is justified. If a Member State takes the view that an internal administrative measure is sufficient for an incorporation into national law, the Commission again examines the content of that measure to determine whether formal incorporation is necessary.

In all, an infringement procedure on the grounds of failure to give notification of national implementing measures should be seen primarily as a means of pressuring the Member States into incorporating Community environmental provisions in their national law within the specified period of time.

In practice it sometimes takes a very long time to implement Directives on the environment. For example, Directive 85/337 on the assessment of the effects of

certain public and private projects on the environment[14] entered into force in July 1988. But Greece, Portugal and Germany took until 1990 to incorporate it into their national legislation and even then, from a legal point of view, failed to fully comply with the Directive.

Directives 89/369 and 89/429 on air pollution from municipal-waste incineration plants[15] entered into force on 1 December 1990. At the end of 1990 notifications were received from Germany, Portugal and the Netherlands.

Finally, it must be added that the Commission is not informed of the national measures taken to implement international conventions on the environment, even in those cases where the Community is a contracting party in its own right. Consequently, the Commission does not monitor implementation of such conventions within the Community. However, if the Community adopts specific legal provisions governing fields covered by an international convention, the Member States are, of course, required to inform the Commission of the national measures adopted to implement these Community instruments. Consequently, these are monitored as provided by Article 155 of the Treaty.

a) Nature Conservation

The general concern about the progressive degradation of nature, despite all Community and national measures taken, manifests itself in the great number of complaints in this sector, the great number of Article 169 procedures started, and an important number of Court decisions: on 31 December 1990 the Court had given 11 rulings, and 6 further cases were pending.

As regards Directive 83/129 as amended,[16] it prohibits the importation of the skins of certain seal pups and products derived therefrom into Member States. The Commission monitors the conformity of national rules with this Directive. As regards practical application, the Directive does not require any information to be passed on to the Commission. As a result, the latter relies entirely on import/export figures for monitoring, which are published after months or even years have elapsed. Moreover their non-specific nature normally makes it impossible to effectively monitor whether or not the import ban has really been complied with.

Regulation No 82/3626 on trade of endangered species of wild flora and fauna applies directly in the Member States. Its application in practice is monitored by the relevant management committee which meets regularly and which co-ordi-

[14] Directive 85/337 on the Assessment of the Effects of Certain Public and Private Projects on the Environment, OJEC 1985, No L 175/40.

[15] Directive 89/369 (new installations), OJEC 1989, No L 163/32; Directive 80/429 (existing installations), OJEC 1989, No L 203/50.

[16] Directive 83/129 concerning the Importation into Member States of Skins of Certain Seal Pups, OJEC 1983, No L 91/30.

nates the activities of the Member States. The Article 169 procedure is initiated only in exceptional cases and also because it is difficult to produce evidence of illegal action.

The two main directives on nature conservation are Directive 79/409 on the conservation of wild birds[17] and Directive 85/337 on the assessment of the effects of certain public and private projects on the environment,[18] although the latter covers other sectors as well as nature conservation.

With reference to Directive 79/409, all twelve Member States provide legislation on the protection of birds. In a number of Member States, however, this legislation is hunting legislation rather than legislation on the conservation of birds.

By 30 December 1990 only Luxembourg had not adopted legislative measures to incorporate Directive 85/337 into national law. Greece, Portugal and Germany introduced legislation in 1990, i. e. some two years after the entry into force of the directive (3 July 1988). The delay means that projects falling within the scope of the Directive, which were given the go-ahead after 3 July 1988 but before the legislation entered into force, often slip through the net of environmental impact assessment, depending on the attitude of the authorities. Portugal, the United Kingdom and Germany even expressly included a clause to this effect in their national legislation, although this would appear to be incompatible with the directive.

b) Water

The Community approach to combating water pollution is not uniform and relies on quality objectives, reduction of emissions and prior authorization. In addition, the vague wording of the Community rules allows the water management authorities scope for interpretation which — given the absence of common sampling methods, the different frequency of sampling, etc. — gives rise to disparities in results from one Member State to another.

In the water sector, as in other sectors of environmental law, environmental protection is largely a matter for the administrative authorities. A number of Member States have therefore judged it sufficient to issue administrative circulars in order to incorporate the Community Directives into national law. A judgment of the Court of Justice[19] in a case concerning Directive 76/160 on the quality of bathing water, did little to change the situation and proceedings are still in progress against several Member States to require them to adopt binding provisions to incorporate the Directives on water into domestic law. These observations apply

[17] Directive 79/409 on the Conservation of Wild Birds, OJEC 1979, No L 103/1.

[18] Directive 85/337 (note 14).

[19] Court of Justice, Case 96/81, Commission v. Netherlands (1982), ECR 1791.

above all to the Directives based on the "quality objectives" approach which were adopted in the Seventies.

c) Air Pollution

Leaving aside the "products" directives relating to air pollution, i. e. Directive 75/716 on the sulphur content of gasoil[20] and Directive 85/210 on lead in petrol[21] the Community Directives designed to combat air pollution concern two main areas:

— authorisation of new industrial plants subject to the use of the best available technology not entailing excessive costs;
— programmes to be drawn up and implemented in order to gradually bring existing plants into line with the latest technology. The same approach is adopted for areas which are sensitive in terms of limit values for sulphur dioxide, suspended particulates, lead or nitrogen dioxide.

As regards the protection of the ozone layer, Regulation No 3222/88 is directly applicable.

Delayed transposal is mainly a problem when it relates to more recently adopted directives. For instance, as regards Directive 88/609 on large combustion plants[22] the Member States should have adopted the necessary measures to adapt their legislation and draw up emission reduction programmes by 1 July 1990. The programmes were due to be forwarded to the Commission by the end of 1990. However, by that date only Germany and the United Kingdom had forwarded programmes and only a handful of Member States had notified the Commission of legislative measures to incorporate the Directive into national law.

Directive 89/369 and 89/429 on municipal waste incineration plants[23] came into force in December 1990. On the date of entry into force only Germany had notified the Commission of national implementing measures, although by the end of the year the Netherlands and Portugal had forwarded legislative measures in respect of the Directives.

d) Chemicals

A number of Member States are having problems keeping up with the Directives adapting Directive 67/548/EEC[24] to technical progress, and are therefore late in

[20] Directive 75/716 on the Sulphur Content of Certain Liquid Fuels, OJEC 1975, No L 397/22.

[21] Directive 85/210 on the Lead Content of Petrol, OJEC 1985, No L 96/25.

[22] Directive 88/609 on Air Pollution from Large Combustion Plants.

[23] Directives 89/369 and 89/429 (note 15).

[24] Directive 67/548 on the Classification, Packaging and Labelling of Dangerous Substances, OJEC 1967, No 196/1. By the end of 1990 this Directive was amended 16 times.

transposing some of the Directives on dangerous substances; it is true however that such Directives occur very frequently, almost one per year.

As regards Directive 88/610/EEC on the prevention of industrial accidents, which was adopted in the wake of the Basie accident in 1986,[25] the Commission has instituted proceedings against a number of Member States for failure to notify it of implementing measures by the date of the Directive's entry into force (1 June 1990).

Finally, mention should be made of the legislative provisions of Directive 87/18/EEC on good laboratory practice, which have not yet been incorporated into national law by all Member States.[26]

e) Noise

The Community directives on noise pollution are aimed at all noise emissions from products. They lay down emission levels which may not be exceeded by products placed on the market. Given that these maximum levels apply to new products, there is little provision for monitoring the day-to-day application of the Community rules.

Delays in incorporating directives into national law have given rise to proceedings in a number of cases, although there are no specific points which need to be raised.

f) Waste

In 1989 the Commission published a report on the application by the Member States of four directives on waste, namely Directives 75/442/EEC (waste), 75/439/EEC (waste oils), 76/403/EEC (PCBs and PCTs) and 76/319/EEC (toxic and dangerous waste).[27] This report was based on the limited information available at the time, as most of the Member States had not forwarded the three-yearly reports required by the Directives.

All the Member States have incorporated the Directives on waste into their national legislation. However, Directive 85/339/EEC on containers of liquids for human consumption[28] allowed Member States to choose between laying down rules and concluding voluntary agreements, and did not therefore necessarily have to be transposed into national law.

[25] Directive 88/160 amending Directive 82/501 on Major Accidents Hazards of Certain Industrial Activities, OJEC 1988, No L 336/14.

[26] Directive 87/18 on Good Laboratory Practice, OJEC 1988, No L 15/29.

[27] Commission, Document SEC (89) 1455 final of 27 September 1989.

[28] Directive 85/339 on Containers of Liquids for Human Consumption, OJEC 1985, No L 176/18.

Nevertheless, several Member States have failed to lay down rules or draw up voluntary agreements on the basis of this Directive. The same applies to the programmes which were intended to provide a framework for the adoption of these legislative instruments or rules, or for voluntary agreements.

2. *Incomplete National Measures*

The second stage of monitoring by the Commission is to check whether the national rules fully and correctly implement Community law on the environment. It is not simply a question of making sure that each Article of the Directive is echoed by the national legislation submitted. In practice, the entire national legislative, administrative and regulatory framework, with all its peculiarities and unique operating procedures, has to be examined to make sure that all the objectives of the Community regulations are attained. This examination is sometimes further complicated by the interdependence of national and regional legislation, which led in one specific case to more than fifty pieces of legislation for transposing one Directive into national (and regional) law. In another case, legislation was transmitted to the Commission which was adopted at the end of the 19th century and subsequently changed at regular intervals.

Special problems arise if the Community Directive is incorporated not by central government, but, for example, by regional authorities, *Länder*, autonomous provinces, etc. Each Member State is free to devolve powers in its country as it sees fit, for example to delegate the responsibility for adopting the measures to implement the Directive to regional or local authorities.[29] The Commission must make sure that the Directive is applied throughout each Member State's entire territory. Generally, it can be said that in those Member States where regional entities are responsible for adopting legislative or regulatory environmental measures — i. e. in Belgium, Germany, Italy, Spain, United Kingdom — a marked delay in the transposal of Directives throughout the territory of the Member State can be observed.

The Commission has repeatedly taken action in cases where a Community Directive on the environment has been incorporated into national legislation by an administrative circular. Circulars are widely used in environmental law and practice. The form of these circulars varies considerably from one Member State to another. So, too, do their scope, legal status and, hence, compatibility with Community law. Following the line consistently taken by the Court of Justice, the Commission is of the opinion that Directives conferring rights or imposing

[29] In Belgium, Germany, Italy, Spain and partly in the United Kingdom and the Netherlands there exists the competence to adopt rules which transpose EEC directives, with entities other than with the central State.

obligations on private individuals cannot be properly implemented by internal circulars which can be amended at any such time as the national administration sees fit. The same applies to unpublished circulars or to published circulars which can subsequently be amended by unpublished circulars. In all such cases, the public has no way of knowing the exact law which is applicable. As the Court of Justice stated, in such cases legal certainty commands that rules with a mandatory character are issued.

> Il y a lieu de rappeler que la conformité d'une pratique avec les impératifs de protection d'une Directive ne saurait constituer une raison de ne pas transposer cette Directive dans l'ordre juridique interne par des dispositions susceptibles de créer une situation suffisamment précise, claire et transparente pour permettre aux particuliers de connaître les droits et de s'en prévaloir. Ainsi que la Cour l'a jugé dans l'arrêt du 15 mars 1990, Commission / Pays-Bas (339/87, non encore publié au Recueil, point 25), afin de garantir la pleine application des Directives, en droit et non seulement en fait, les Etats membres doivent prévoir un cadre légal précis dans le domaine concerné.[30]

It may be deduced from this case law that, generally speaking, administrative measures are not sufficient to incorporate environmental Directives in national law and that regulations or even laws are needed for this purpose, as soon as these Community instruments pronounce prohibitions, fix concentrations or otherwise refer to rights or obligations of individuals.

Furthermore, these legal measures must be published in an official gazette or some other suitable form, so as to inform all persons subject to the law about measures to protect the environment and enable them to ensure they are complied with.

Another important problem is that of limit values. Sometimes, it is argued that there is no need to explicitly include the limit values set at the Community level for the concentration of certain pollutants in the air or water in the national legislation, but that all Member States have to do is to ensure that the values are observed in practice. The Commission has always firmly asserted that the Community limit values must be enshrined in generally applicable legislation or regulations. It must be possible to find the limit value set by the Community in the national rules. The Court of Justice stated in this regard:[31]

> Thus, it is clear that legal certainty also requires the specific transposal of individual limit values, maximum permissible concentrations and emission values into national legislation. A general reference to Community legislation is not permitted.

A Directive is also deemed to be incompletely incorporated if, for example, national law allows administrative authorities to make exceptions to the provi-

[30] Court of Justice, Case 131/88, Commission v. Germany, Judgment of 28 February 1991, as yet unreported.

[31] Court of Justice, Case 361/88, Commission v. Germany, Judgment of 30 May 1991, as yet unreported.

sions of the national law in question, while the Directive does not provide for such exceptions. The same applies if the definitions of the Directive are not incorporated in their entirety into national law — which would alter the scope of the Directive.

Another example is that of Directive 85/337/EEC on the assessment of the effects of certain projects on the environment. The measures taken by some Member States to implement that Directive leave it entirely to the discretion of the Member States to decide whether such an assessment is needed for projects covered by Annex II to the Directive. However, the recitals and the various clauses of the Directive, particularly Article 2, clearly imply that an environmental impact assessment must also be made for the projects listed in Annex II, whenever the nature, scale or site of the project so dictate. Accordingly, the national legislation must make provision for the assessment of the projects listed in Annex II in such circumstances. National legislation providing only for environmental impact assessments of projects listed in Annex I cannot, therefore, be regarded as complete.

Until now, little has been done to tackle the problem of sanctions provided for by national legislation implementing the Community rules. Recently, the Court of Justice ruled that Member States are under an obligation to impose sanctions for non-compliance with their national provisions implementing a Community Directive.[32] Each Member State is free to choose whichever sanctions it considers appropriate, as long as they provide an adequate, effective deterrent in proportion to the offence, and are of equivalent force to the sanctions imposed in similar cases by the national legislation.

Financial sanctions came to Community environmental policy almost through the back-door. Following the amendment of the EEC Treaty in 1987 and the implementation of its Article 130 d, the Council, in 1988 adopted Regulation 2052/88 on the reform of the Community Structural Funds[33] or, in more simplistic terms, on the main instruments of financial intervention of the EEC in matters of agricultural, regional or social policy. Article 7 of this Regulation states:

> Measures financed by the Structural Funds or receiving assistance from the European Investment Bank or from another existing financial instrument shall be in keeping with the provisions of the Treaties, with the instruments adopted pursuant thereto and with Community policies, including those concerning ... environmental protection.

Thus, according to this provision, measures may not be financed with resources from the Structural Funds if they fail to comply with all the provisions of secondary environmental legislation and, in addition, the objectives of Community environment policy, as set out in Article 130 r (1) of the Treaty.

[32] Court of Justice, Case 68/88, Commission v. Greece, ECR [1989] 2965.

[33] Regulation 2052/88 on reform of the Community Structural Funds, OJEC 1988, No L 185/13.

Subsequently, on several occasions the Commission suspended payments in the framework of regional policy which were destined to co-finance projects that did not altogether comply with environmental legislation. The main areas covered were the construction of motorways or other infrastructure projects without a proper environmental impact assessment according to Directive 85/337/EEC. As evaluated from the echo in the national media, this blocking of funds had a far greater impact on national or regional decision-making procedures than any procedure under Article 169 could have hoped to achieve. What is more, the systematic approach by the European Investment Bank and by the Commission, to ask whenever a project is submitted for financial assistance whether environmental legislation is complied with, has a marked, though admittedly slowly increasing, preventive effect on local, regional or national administrations, particularly in the transport, infrastructure, or economic development sectors.

The threat of financial sanctions is, of course, limited. Until now, there has not been one single decision to refuse payment due to disregard of environmental legislation. And in the area of large or important infrastructure projects the political pressure exercised becomes overwhelming — casting some doubt whether the threat of refusal to give financial assistance really is an effective tool in monitoring implementation. In the end, much probably depends on the determination to give full effect to Article 7 of Regulation 2052/88.

a) Nature Conservation

In none of the Member States is Directive 79/409/EEC on the conservation of birds[34] incorporated into national law by a single legislative instrument or set of rules. For a start, rule-making powers in the sphere of nature conservation are often delegated to the regions, as is the case in Belgium, Germany, Italy, Spain and the United Kingdom. Even in a country like France, the rules governing hunting are laid down partly at the departmental level and on an annual basis as regards the hunting periods. Furthermore, the rules incorporating the Directive into national law relate to nature conservation, the protection of endangered species and hunting, and are therefore laid down in legislation which is traditionally separate.

As a result, the Commission has to scrutinize more than twenty texts in some Member States and study how they relate to one another, and is sometimes unable to keep track of the frequent amendments which are made.

In a large number of Member States the rules on hunting, which were introduced long before the adoption of Directive 79/409/EEC, have not been brought into line with it, due partly to the activities of pressure groups. The Commission has therefore initiated proceedings on the grounds of partial compliance against most of the Member States, including the United Kingdom, Germany, Denmark and

[34] Directive 79/409 (note 17).

the Netherlands. In the case of Germany and the Netherlands, the matter was even referred to the Court of Justice[35] but the necessary amendments still have to be made.

A specific problem concerns certain birds which are sometimes considered not to need protection. In its proposal for Directive 79/409/EEC, the Commission had suggested to exempt such birds — jays, magpies, rooks and others — from the field of application of Directive 79/409/EEC.[36] The Council unanimously decided that all wild birds need protection.[37] When the Commission later tried to enforce Directive 79/409/EEC, it met with considerable opposition. The United Kingdom, Germany, Denmark, Ireland and others deliberately deviated from the Directive's requirements and provided for little or no protection for a number of "pest" birds.[38] In 1991, the Commission proposed an amendment to Directive 79/409/EEC which allowed the hunting of a number of pest birds, thus adapting the law to practice.[39]

The Directive allows for derogations "where no other satisfactory solution can be found" (Article 9). This very general wording has led to over-generous derogations being granted under the national rules.

As regards Directive 85/337/EEC,[40] the task of assessing the compliance with Community law of the national provisions giving effect to it is complicated by the fact that most Member States have only recently introduced legislation. These national rules are often very complex owing to their regional nature, do not always refer to the same criteria as Directive 85/337/EEC and contain omissions or deviations.

The most serious problem encountered so far concerns the incorrect transposal of the provisions relating to the assessment of the environmental effects of projects under Annex II. According to the Commission's interpretation, Articles 2 and 4 (2) of the Directive do not allow the Member States complete discretion as to whether or not to require an assessment of projects under Annex II; such an assessment must be made when, for instance, the nature, scale or location of a project so requires. Therefore, the national legislation must stipulate that each case be examined on its own merits, or must lay down criteria for projects under Annex II.

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[35] Court of Justice, Case 288/88, Commission v. Germany, Judgment of 3 July 1990, not yet reported, Case C 339/87, Commission v. Netherlands, Judgment of 15 March 1990, not yet reported.

[36] OJEC 1977, No C 24/3.

[37] Directive 79/409 (note 17).

[38] Of course, each Member State had its own list of "pest" birds.

[39] OJEC 1991, No C 63/19.

[40] Directive 85/337 (note 14).

b) Water

In applying Directive 74/440/EEC (quality of surface water),[41] a number of Member States exempt surface water which is "bank-filtered" before being used as drinking water. In support of such exemptions they invoke a statement entered into the Council minutes when the Directive was adopted.[42] The Italian legislation expressly stated that compliance with certain parameters would not be monitored.

The legislation of several Member States on drinking water (Directive 80/778/EEC)[43] is a cause for concern, either because the maximum authorized concentrations of certain pollutants have not been incorporated in the national legislation, or because the national rules make express provision for certain concentrations to be exceeded. Derogations of this kind were provided for in Germany (up until 1989), Italy, Spain (up until 1991) and Belgium.

In addition, Germany and the United Kingdom have issued recommendations for action in the event of certain values being exceeded: this practice seems contrary to the requirement to apply the Directive in full.

The Commission has asked the Court of Justice to give a ruling on the nature of the obligation of the Member States to incorporate the details of Directive 80/68/EEC on groundwater into national law. The Court's decision, confirming the Commission's viewpoint, fixed important requirements for the implementation of Directive 80/68/EEC and, indeed, other environmental Directives.[44]

c) Air Pollution

The Commission takes the view that the Directives laying down air quality limit values which "must not be exceeded throughout the territory of the Member States" must be transposed into national law in such a way that the limit value laid down is incorporated into the national legislative instrument. As there was a difference of opinion on this point between the Commission and Germany, the Court of Justice, to which the Commission had referred the matter, handed down a judgment during 1991 with precise criteria as to what may be required of national implementing legislation.[45]

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[41] Directive 75/440 on the quality of surface water intended for the abstraction of drinking water, OJEC 1975, No L 194/26.

[42] The Court of Justice has ruled that declarations in the Council minutes, which are not published, may not be used for the interpretation of a Directive, Case 429/85, Commission v. Italy [1988] ECR 416.

[43] Directive 80/778 on the Quality of Water Intended for Human Consumption, OJEC 1980, No L 229/1.

[44] Court of Justice, Case 131/88 (note 30).

[45] Court of Justice, Case 361/88 (note 31).

The incorporation of Directive 84/360/EEC on air pollution from industrial installations[46] into national law has proved a problem in some Member States, in particular as regards the clause which stipulates that the authorities must require new plants to use the best available technology not entailing excessive costs. The problem is that while this requirement is designed first and foremost to ensure that the Directive is actually applied in practice, this is not possible in the absence of a corresponding requirement in the national rules. Furthermore, in the absence of a consensus determining what the best available technology in a specific sector of industry actually is, each Member State interprets this notion in a different way.

d) Chemicals

In the chemicals sector the problem of partial compliance arises above all in the context of Directive 82/501/EEC on the prevention of industrial accidents and the subsequent amendments to it.[47] The complex and innovative nature of this Directive has led to disparities between the national rules on certain points, particularly where they pre-date the Community rules.

e) Noise

As regards the conformity of national legislation to the Directives, Belgium granted exemptions from Directive 80/51/EEC on aircraft noise, allowing the regional airports more time to come into line with the Directive.[48] The Commission initiated an urgency procedure, and at the beginning of 1991 was informed by the Belgians that the exemption had expired at the end of 1990 and would not be extended.

f) Waste

Monitoring the compliance of national legislation with the Community provisions on waste has proved particularly difficult since the Commission has been preparing substantial amendments for a number of years now, in particular to Directives 75/442 (waste),[49] 79/319 (dangerous waste),[50] 76/403 (PCBs and PCTs),[51] 84/631 (transport of waste)[52] and 85/339 (containers of liquids for human

[46] Directive 84/360 on Air Pollution from Industrial Plants, OJEC 1984, No L 188/20.

[47] Directive 82/501 on the Major-Accident Hazards of Certain Industrial Activities, OJEC 1982, No L 230/1.

[48] Directive 80/51 on the Limitation of Noise Emissions from Subsonic Aircraft, OJEC 1980, No L 18/26.

[49] Directive 75/442 on Waste, OJEC 1975, No L 194/39.

[50] Directive 78/319 (note 7).

[51] Directive 76/403 on PCB-PCT, OJ 1976, No L 108/41.

[52] Directive 84/631 on the Transfrontier Shipment of Hazardous Waste, OJEC 1984, No L 326/31.

consumption).[53] By now, most of the planned amendments have been incorporated in formal proposals for amending Directives. In several cases it was deemed inappropriate, if not impossible, to initiate the procedure under Article 169 against a Member State if the Community provision in question was liable to be amended by the Council.

Here, too, the lack of precise definitions in the Directives has been a problem. For example, the definition of toxic and dangerous waste in Directive 78/319/EEC[54] is so vague that it is hardly surprising if Member States adopt many varying approaches to defining what constitutes dangerous waste.

Directive 75/442 and 78/319 state that (hazardous) waste must be disposed of "without endangering human health and without damaging the environment, and in particular ... without risk to water, air, soil and plants and animals."[55] From a strictly legal viewpoint, a clause of this kind can easily be transposed into a national rule which, while it follows the original to the letter, may easily be circumvented in practice in disposing of hazardous waste.

Furthermore, there is a difference of opinion between the Member States and the Commission as to whether waste should be governed by Article 100 a or Article 130 s. This has led the Commission to ask the Court of Justice for a ruling on the matter.[56] Finally, in spite of the Court decisions in 1990 reaffirming that recyclable waste should be classified as waste,[57] some Member States treat this waste as a product and therefore exempt it from the rules applicable to waste.

These problems, allied to staff shortages and the fact that the application of environmental law has only been systematically monitored since 1984, have meant that there has been no systematic monitoring of the compliance of the national rules with Community law. A further contributory factor has been the failure of the Member States to draw up the waste management plans or programmes which they are required by the Directives to adopt, forward to the Commission and then implement.

The Commission has thus been mainly engaged in examining the compliance of the national legislation with Community law which is actually being implemented.

3. *Inadequate Application of Community Environmental Rules*

National legislation implementing a Community Directive on the environment cannot provide automatic protection for the environment. It must be applied in

[53] Directive 85/339 (note 28).

[54] Directive 78/319 (note 7).

[55] Directive 75/442 (note 49), Article 4; Directive 78/319 (note 7), Article 5.

[56] Case C55/91, Commission v. Council, OJEC 1991, No C 288/8.

[57] Court of Justice, Case 206-207/89, Zanetti, Judgment of 28 March 1990, not yet reported.

practice. In other words, plans or programmes must be adopted and implemented, limit values must be enforced, official licences must be adapted, etc. Even national legislation copying a Directive word for word will remain meaningless unless it is applied.

Every Community Directive on the environment includes a clause requiring the Member States to inform the Commission of the national rules adopted to implement the Directive and to send the text to the Commission. Consequently, incorporation of the Directives into national legislation and the compatibility of this national legislation with the Commission provisions can be monitored by examining the texts adopted. However, the Community Directives do not normally contain a clause requiring the Member States to inform the Commission of the effective implementation of the Community rules on the environment.

It is true that many of the Directives on the environment require the Member States to submit regular reports on the measures taken to implement the Directives or specific aspects of the Community rules. However, not all Member States systematically submit these reports to the Commission. Only a minority, in particular Denmark and the United Kingdom, have fully complied with their obligations. The Commission mentioned this in its report to Parliament on the implementation of the Community waste Directives.[58] In this case, as with Directive 79/409/EEC,[59] several Member States failed to submit their reports, making it impossible for the Commission to publish its own three-yearly report on the measures taken to implement the Directives. A similar situation has arisen in the case of air quality,[60] where the Commission's yearly reports have fallen behind schedule because the Member States have been submitting their own reports late, if at all.

Apart from the submission problem, the national reports on the implementing measures usually give no detailed evidence of effective implementation of the rules on the environment. Instead, they primarily provide a brief summary of the technical and administrative measures already in place or adopted.

The reports from the Member States therefore are rarely a source of information on effective implementation of Community environmental rules.

The Commission has conducted some studies of its own on effective implementation of the Directives on the environment in the Member States, although inevitably only in a limited number.[61] An added problem which necessarily limits

[58] Commission (note 27).

[59] Directive 79/409 (note 17).

[60] Directive 80/779 on Air Quality Limit Values and Guide Values for Sulphur Dioxide and Suspended Particulates, OJEC 1980, No L 292/30; Directive 82/884 on a Limit Value for Lead in the Air, OJEC 1982, No L 378/115; Directive 85/203 on Air Quality Standards for Nitrogen Dioxide, OJEC 1985, No L 87/1.

[61] These studies are not systematically published.

the value of such studies is that it has proved extremely difficult to gain access to the data held by the national, regional or local authorities on, for example, the frequency and results of the inspections, the firms inspected, the conditions laid down in the licences granted or the pollution levels recorded.

Consequently, the Commission's main sources of information are the complaints. The complaints system introduced by the Commission in the late 1960s, originally to smooth the way for the completion of the internal market, has mushroomed spectacularly in recent years where the environment is concerned. This trend has been boosted by the growing number of written and oral questions or petitions reporting inadequate implementation of the rules on the environment. The Commission has decided to treat these in the same way as complaints. The following figures show the development:[62]

Number of Complaints and of Cases Otherwise Detected by the Commission's Own Inquiries

	Environment		All sectors of EEC activity	
Year	Complaints	Cases otherwise detected	Complaints	Cases otherwise detected
1982	10	-	352	112
1983	8	-	399	192
1984	9	2	476	145
1985	37	10	585	244
1986	165	32	791	293
1987	150	38	850	260
1988	216	33	1.137	307
1989	465	60	1.195	352
1990	480	42	1.252	283

Sectors in 1990

	Complaints	Cases otherwise detected
Air	26	2
Chemicals	5	-
Water	140	22
Noise	6	1
Waste	34	3
Nature	269	14

(Directive 85/337/EEC on the assessment of the effect of certain public and private projects on the environment is included under "nature")

[62] Commission (note 11), 57-59; the data for 1990 have not yet been published.

Complaints and Cases Otherwise Detected 1982-1990[63]

1 = complaints 2 = cases otherwise detected

Country	1982		1983		1984		1985	
	1	2	1	2	1	2	1	2
Belgium	1	-	1	-	-	-	0	1
Germany	1	-	1	-	1	2	3	1
Denmark	-	-	1	-	-	-	1	1
Spain								
France	4	-	1	-	-	-	3	2
United Kingdom	1	-	1	-	2	-	11	3
Greece	-	-	1	-	2	-	14	-
Ireland	1	-	-	-	-	-	-	1
Italy	2	-	1	-	4	-	2	-
Luxemburg	-	-	-	-	-	-	-	-
Netherlands	-	-	1	-	-	-	3	1
Portugal								
	10	0	8	0	9	2	37	10

Country	1986		1987		1988		1989		1990	
	1	2	1	2	1	2	1	2	1	2
Belgium	7	3	4	3	6	3	18	3	17	5
Germany	6	6	14	6	35	3	36	3	56	2
Denmark	1	2	4	3	5	1	-	1	3	-
Spain	5	-	29	4	51	4	91	10	111	16
France	44	5	16	1	36	2	43	6	47	2
United Kingdom	32	-	30	3	31	7	192	9	125	2
Greece	53	3	17	3	13	2	24	11	40	4
Ireland	-	5	9	1	12	2	24	3	19	-
Italy	13	3	16	6	15	3	22	7	33	9
Luxemburg	-	2	-	5	1	1	-	3	3	-
Netherlands	2	3	4	1	2	5	5	2	7	-
Portugal	2	-	7	2	9	-	10	2	19	2
	165	32	150	38	216	33	465	60	480	42

The fact that individuals are able to register a complaint with the Commission, can promote the creation of a Community-wide awareness of the environment, strengthen the accessibility of the institutions of the European Communities for

[63] Commission (note 11), 57-59; the data for 1990 have not yet been published.

the man-in-the-street, and bring home to the individual the fact that he bears part of the responsibility for his environment and can contribute to its protection and maintenance. The Commission makes every effort to encourage complaints. Every letter complaining that Community environmental law — or Community laws relating to other fields — is being infringed is entered in a special register of complaints maintained by the Commission. The Commission does not require that the complainant provides proof of his contentions, cites provisions and Directives or observes other formalities. However, the complaint must be sufficiently specific to enable an investigation to be carried out. Such vague claims as "birds are being killed in ..." or "the water in X is undrinkable" are not treated as complaints.

The Commission informs the complainant that his letter has been entered in the register of complaints and, at the same time, requests the factual and legal information from the Member State needed to assess the complaint. The Commission obtains its own expert's opinions and, where necessary, requests that documents be submitted to it. As yet there have been no formal hearings of witnesses of the parties involved, as part of the process of investigating a complaint such action would seldom have any practical relevance.

When the facts of the case have been clarified, the Commission makes a formal decision within one year of receiving the complaint. If the Commission decides to initiate a procedure under Article 169, it sends a letter of formal notice to the Member State in question, which — like all other action taken in the course of the complaint procedure — treats the identity of the complainant as confidential. If the Commission has been unable to discover an infringement of Community law, it discontinues the procedure and informs the complainant accordingly.

There is no provision for complaining about the discontinuation of the procedure.[64] However, a complainant may, of course, advance counterarguments which can lead to a new procedure.

Yet although these complaints from members of the public, industry, non-governmental organisations, and, on occasion, local authorities, embassies or even government ministers express the concern felt for the environment and the importance attached to action by the Community, the current arrangements display two main disadvantages from an institutional point of view:

The Commission has to concentrate its efforts on the cases brought to its attention by the plaintiffs. These are not necessarily either the most serious or the most urgent cases. Above all, a complaint is a sign that the citizens are willing to seek a solution to the problem facing them. If the public resigns itself to a deteriorating environment, there is virtually nothing the Commission can do. Secondly, effective implementation of the rules on the environment depends on

[64] Court of Justice, Case 247/87 Star Fruit Company v. Commission (1989), ECR 836.

application at the local, regional or national level, which is more effective in some places than in others — a situation that runs counter to the principle that Community rules must be applied identically throughout the Community. Thus, when the Commission tackles the non-respect of Directive 76/160/EEC on the quality of bathing water as regards this or that beach,[65] it does not at the time tackle the quality of other bathing water in the same Member State or, indeed, in other Member States.

Directive 80/778 relating to the quality of water intended for human consumption[66] is one example. As the Commission had no data on the quality of the drinking water in Greece as a whole it initiated just one procedure concerning one specific site in that country in response to a complaint. However, after receiving numerous complaints about the drinking water quality in the United Kingdom, Germany, France, Spain, Belgium and other Member States, the Commission initiated a series of general procedures based on Article 169 against those countries.

The Commission lacks the resources to assess the validity and accuracy of the data or the reports received from the plaintiff. Basically, all it can do is to ask the Member States for their comments on the points raised by the person lodging the complaint. With some 500 complaints a year, this generates a constant flood of requests for information, exchanges of documents, etc., aggravated by the fact that the central authorities in the Member States themselves have to seek the data from the regional or local authorities or firms concerned, a cumbersome procedure, although by no means justifying the often lengthy delays before the Member States reply.

The Commission has to base its own assessment of the case on the replies which it receives. However, since the Commission lacks the resources to study each file submitted to it in depth, there is a danger that any action it takes will be limited. What is more, the Commission departments are steadily becoming overloaded with processing increasingly difficult, complex technical complaints.

One such example is the procedure to assess whether the Member States have really taken the measure to avoid "any disturbances affecting birds insofar as these would be significant having regard to the objectives" of conserving wild birds (Article 4 (4) of Directive 79/409),[67] where some of the dossiers substantiating the complaints are several thousand pages long. Similar situations have arisen with complaints asking the Commission to examine whether dangerous wastes are being disposed of "without endangering human health and without harming the environment" (Article 5 of Directive 78/319).[68] The same applies to environmental

[65] Directive 76/160 on the Quality of Bathing Water, OJEC 1976, No L 31/1.

[66] Directive 80/779 (note 43).

[67] Directive 79/409 (note 17).

[68] Directive 78/319 (note 7).

impact assessments, where some plaintiffs submit bulky, highly complex dossiers requiring detailed examination to ascertain whether the rules laid down in the Directive on the content of the impact assessment have been observed. There are numerous examples of this kind, for instance, the construction of motorways, highspeed railways, bridges, tunnels, dams etc.

Many Directives call for preparation of a plan or programme designed to bring about a gradual improvement in the state of the environment. But since neither "plan" nor "programme" is defined in the environmental directives, the Member States' interpretations vary widely.

All too often these plans or programmes are not submitted to the Commission, despite the specific requirements laid down in the Directives. For example, the Commission's first report on the implementation of Directive 80/779 on air quality limit values for sulphur dioxide and suspended particulates[69] stated that over 120 sites had been designated as highly polluted by the Member States, which therefore should have submitted clean-up plans for them. By the time of the Commission's fourth report 56 such sites remained. However by the start of 1991 the Commission had received just eight clean-up programmes. Moreover, the Commission has received no clean-up programme for any of the four sites designated by the Member States under Directive 82/884 on lead in the air.[70] Finally, neither has the Commission received a single programme for the 35 zones designated under Directive 85/203 on air quality standards for nitrogen dioxide,[71] apart from a number of general measures from France to improve air quality.

There is one other reason for mentioning these three Directives. They not only stipulate that the quality objectives which they have laid down should not be exceeded within the territory of the Member States but also require the Member States to set up measuring stations to see whether they are exceeded at the sites where the highest pollution levels are suspected. However, the wording says nothing about the number of measuring stations required. As a result, Germany (excluding the new *Länder*) has 200 stations, France 85 and the Netherlands 42, but Spain has just 15 and the United Kingdom only six.[72]

It is repeatedly argued in complaints that nitrogen dioxide levels in the air are too high in one Member State or another. But all too often it turns out that no air quality measurements are taken at the site mentioned in the complaint. Since the complaints concerned built-up areas, this leads to the conclusion that in some parts of the Community, the limit values are not respected all over the territory of

[69] Directive 80/779 (note 60).

[70] Directive 82/884 (note 60).

[71] Directive 85/203 (note 60).

[72] Institute for European Environmental Policy, Control of Implementation of Community Directives on Air Pollution in Member States (London) 1987.

a Member State, but rather only at those places where measuring stations are installed.[73]

Apart from these procedural problems, there is one other major obstacle to monitoring the practical implementation of the Community Directives:

The Directives, which are addressed to the Member States, not to private citizens or firms, are often imprecisely worded. For example, several stipulate that companies emitting pollutants must use "the best available technology not entailing excessive cost".[74] Since the Community has given no clear, precise definition of the implications of this concept for individual industries, it is interpreted differently from one Member State to another, from one industry to another and, probably, even from one company to another. Article 13 of Directive 84/360 requires the Member States to "implement policies and strategies . . . for the gradual adaptation of existing plants . . . to the best available technology . . . not entailing excessive costs".[75] The loose wording of this clause makes it virtually impossible to monitor whether a given Member State has fulfilled its obligations under Article 13 of this Directive at any given installation.

Article 3 of Directive 85/210 on the lead content of petrol[76] requires the Member States "to take the necessary measures to ensure the availability and balanced distribution within their territory of unleaded petrol from 1 October 1989". The Commission has initiated several Article 169 procedures to ensure the effective implementation of this clause. Nevertheless, the difficulties hampering rigorous application of Article 3 are only too obvious.

Directives 75/442 on waste and 78/319 on dangerous waste[77] stipulate that waste should be disposed of "without endangering human health and without harming the environment", and in particular "without risk to water, air, soil, plants or animals". It is submitted, that this clause would be precise enough to oblige clean-up measures for leaking landfill sites, but obviously gives broad scope for interpretation.

Article 6 of Directive 76/160 on bathing water quality,[78] in conjunction with Annex V to the Directive, calls for the monitoring of the salmonella content in bathing water, "should inspection . . . reveal that there is a discharge or a probable discharge of substances likely to lower the quality of the bathing water". Monitoring can therefore be avoided simply by not carrying out the inspections, which are left to the discretion of the Member States.

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[73] See wording of Article 6 and Annex III of Directive 85/203 (note 60).

[74] Directive 84/360 (note 46), Article 4; Directive 89/369 (note 15), Article 3.

[75] Directive 84/360 (note 46).

[76] Directive 85/210 (note 21).

[77] Directive 75/442 (note 49); Directive 78/319 (note 7).

[78] Directive 76/160 (note 67).

Articles 3 and 4 of Directive 89/428 on waste from the titanium dioxide industry[79] require the Member States to prohibit all discharges of the waste into water bodies covered by the Directive with effect from the end of 1989. However, it also allows the postponement of this ban until 1992 or 1994 "if serious techno-economic difficulties" so dictate. It is virtually impossible for the Commission to monitor this clause, all the more so since the Commission bears the burden of proof that the techno-economic difficulties are not serious enough to require postponement once a Member State has invoked it.

The Commission's efforts to monitor effective implementation of Community Directives have concentrated on the cases highlighted by complaints, petitions or written or oral questions. Each case has been systematically investigated in line with the Commission's internal instructions for handling complaints, which reflect the guarantee given on the complaint form that every case will be looked into.[80] Beyond this, the Commission has almost no other sources of information enabling it to assess whether the Directives on the environment are effectively implemented. In cases where its investigations into a complaint or a matter raised by Parliament reveal a more general problem, the Commission examines the practice in each Member State. For example, when the Commission discovered that Belgium was failing to comply with Directive 80/51 on aircraft noise[81] it asked all the other Member States for information to check whether the aircraft landing on their territory complied with the Directive.

On rare occasions, the Commission departments visit a place in order to find out more about the facts of a particular complaint. These visits take place at the initiative of the Commission, which informs the Member State and the complainant of its intention, in order to ensure that all facts can be clarified on the site. Though the repercussions of such visits are sometimes considerable, they cannot be called inspections, since no investigation is carried out. It would seem more appropriate to call them fact-finding missions, since their main purpose is to clarify all the facts of a case in order to allow a proper legal assessment of whether there is a breach of Community law. The European Parliament has been asking for several years for environmental inspectors to be instituted at the Commission. They would be charged to check the implementation of EEC environmental legislation in and by Member States.[82] This request was repeated in 1989 when the Commission suggested the creation of an European Environmental Agency. Parliament wanted this Agency to also be able to make inspections, whereas the Commission

[79] Directive 89/428 on Waste from the Titanium Dioxide Industry, OJEC 1989, No L 201/56.

[80] The internal instructions are not published. See, however, the standard complaint form which has been published by the Commission and which gives complainants some "guarantees" as regards the handling of the complaint, OJEC 1989, No C 28/6.

[81] Directive 80/51 (note 48).

[82] European Parliament (note 3).

and the Member States preferred to give it the task mainly of collecting, processing and distributing data on the environment. By way of compromise, an Article 20 was included in the Council's Regulation creating the Agency, stating that the Council would, within two years, reconsider the question whether environmental inspection should be one of the Agency's tasks.[83]

At the Community level, inspectors act at present in the areas of customs, fishery, competition and nuclear energy. Furthermore, Community veterinarians, together with Member States' veterinarians, visit slaughterhouses inside the EEC and in all other countries which import meat into the EEC, in order to check hygiene conditions. If Community inspectors can act in all of these sectors, there is no institutional argument against having EEC environmental inspectors. The opposition to this proposal thus seems to be rather ideological.

The Commission has, until now, refrained in two areas from systematically taking action each time a Member State fails to meet an obligation explicitly imposed by a Directive. The first is the submission of a clean-up plan or programme. There have been too many such cases. For example, no Member State has sent the Commission plans, as provided for in Article 12 of Directive 78/319, relating to the disposal of toxic and dangerous waste throughout its territory.[84] The same applies to Directive 75/442 on waste.[85] The unsatisfactory situation as regards the clean air programmes has been mentioned above. As regards water quality, Article 7 of Directive 76/464[86] requires the Member States to determine the level of pollution of surface and coastal waters by the substances included in List II of the Directive and to lay down quality objectives in this area.

The second area concerns the non-submission of reports on the measures taken to implement the Directives on the environment. Once again, there have been so many cases that systematic action was probably considered unlikely to produce any improvement.

The failure to submit clean-up programmes and reports on the measures taken to implement the Directives is a sign of the weakness of the local, regional or national authorities' infrastructure for environmental protection. Preparation and implementation of clean-up plans or programmes calls for constant action entailing the deployment of considerable human and financial resources by the administrations concerned. These resources are not available in sufficient quantity everywhere in the Community.

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[83] Regulation 1210/90 on the Establishment of a European Environmental Agency, OJEC 1990, No L 210/1. It should be noted that the word "inspection" is not used in the text.

[84] Directive 78/319 (note 7).

[85] Directive 75/442 (note 49).

[86] Directive 76/464 on Pollution caused by Certain Dangerous Substances Discharged into the Aquatic Environment, OJEC 1976, No L 129/23.

To try to solve the problems encountered with the reports on implementing the Directives, the Commission submitted, in 1990, a proposal for a Council Directive to ensure more rational, systematic preparation of the national reports.[87] In particular, it proposed that these reports should be:

(a) based on a questionnaire compiled by the Commission;

(b) written sector by sector (air, water, waste, etc.);

(c) submitted at three-yearly intervals.

This proposal will, once adopted, fill a major gap in implementation of the Community law on the environment.

a) Nature Conservation

The practical application of Directive 79/409[88] represents the greatest problem as far as monitoring the application of environmental legislation is concerned. The Directive requires Member States to designate habitats for birds under particular threat — listed in Annex I — and to implement specific conservation measures in those areas. The designated habitats must form a coherent network throughout Europe capable of ensuring the conservation and survival of these birds. So far, some 600 habitats have been designated, about half the figure estimated to be necessary. Only Denmark and Belgium have entirely fulfilled their obligations in this regard.

The proceedings instituted under Article 169 relate essentially to two situations, namely an insufficiency of designated areas and the destruction of habitats — already designated or due to be designated as areas of importance for the conservation of the birds listed in Annex I — as a result of economic activities (agriculture, industry, urban development, tourism, transport systems, etc.), which in some cases receive assistance from the Structural Funds. Striking a balance between economic interests and environmental needs is very complicated in almost all cases. The judgment of the Court of Justice in case 57/89 which involved a designated habitat in Germany, now provides some guidelines to the Commission and to Member States as regards the interpretation of Article 4.[89]

Little information is available about the practical application of the derogations which are granted. The annual reports which the Member States are meant to forward to the Commission either fail to arrive or are couched in such general terms that they make it virtually impossible to discern whether the provisions of Article 9 are being complied with in letter and in spirit. At the end of 1990 the

[87] OJEC 1990, No C 214/6.

[88] Directive 79/409 (note 17).

[89] Court of Justice, Case 57/89, Commission v. Germany, Judgment of 28 February 1991, as yet unreported.

Commission published a report "Information sur l'application de la directive 79/409".[90] The fact that until now it has not been possible to publish a single one of the three-year reports which it is obliged to publish under Article 13 of that Directive aptly illustrates the difficulty in obtaining appropriate information.

In the majority of Member States the implementation of Directive 85/337[91] is still in its infancy. Except in very extreme cases the Commission refrains from intervening as regards the quality of impact studies and the subsequent assessment, as the Directive makes no such provision. The result is that, even when the procedure provided for by the Directive is formally observed, the impact studies are often mediocre and almost invariably under-estimate environmental effects. In addition, the opinions expressed by members of the public when consultations are held are not necessarily taken into account by the authorities. The impact assessment therefore frequently takes on the appearance of a formal exercise designed to justify the completion of a project which has already been decided upon on the basis of economic and technical criteria.

Furthermore, where the realisation of large infrastructure projects is in question, such as the building of motorways, high-speed railways, bridges, tunnels etc., the political pressure at all levels is such that the procedural means of Directive 85/337 are often not sufficient to ensure that the environmental impact is properly weighed against other interests.

b) Water

The practical application of the water pollution directives represents by far the biggest problem in the water area.[92] With the exception of Directive 76/160,[93] the Commission receives very little information on the application of these directives. The main source of information continues to be complaints from individuals, which have been particularly numerous in relation to bathing water and drinking water.

As regards the directives laying down quality objectives (Directives 75/440 on surface water,[94] 76/160 on bathing water,[95] 78/659 on fish waters,[96] 79/923 on

[90] Commission des Communautés Européennes, Information sur l'application de la directive 79/409/EEC, Bruxelles-Luxembourg 1990, EUR 12835.

[91] Directive 85/337 (note 14).

[92] *See also Nigel Haigh / Graham Bennet / Pascale Kromarek / Thierry Lavoux*, European Community Environmental Policy in Practice, Comparative Report: Water and Waste in Four Countries. A Study on the Implementation of the EEC Directives in France, Germany, the Netherlands and the United Kingdom, London 1986.

[93] Directive 76/150 (note 65).

[94] Directive 755/440 (note 41).

[95] Directive 76/160 (note 65).

[96] Directive 78/659 on the Quality of Fishing Waters, OJEC 1978, No L 222/1.

shellfish waters[97] and 80/778 on drinking water),[98] the Member. States were required to draw up clean-up programmes for water which did not meet the requirements of the Directives, in order to meet the quality objectives within the time limit laid down by the Directives. In a large number of cases, these were either not drawn up or not implemented, with the result that the quality objectives are still not met. The annual reports published by the Commission on bathing water show that some 20 % of the bathing waters covered by Directive 76/160 do not comply with Community provisions.[99] Failure to adhere to the maximum authorized concentrations laid down by Directive 80/778 (drinking water) is a problem in all the Member States, particular, regarding parameters for nitrates and pesticides. Also, where both directives are concerned, there are cases where not all the parameters in question are measured.

Regarding Directive 78/659,[100] only three Member States have notified the Commission of fishing waters which fall within the scope of the directive; the figure for Directive 79/923 is four.[101]

None of the Member States has forwarded quality objectives to the Commission for the substances featured in List II of Directive 76/464,[102] and at least ten Member States have not forwarded details of clean-up programmes. The forwarding of reports on the implementation of measures in the various sectors contained in List I is the exception rather than the rule, and does not enable a reliable picture to be formed as to the extent to which these Directives have been followed by the Member States.

c) Air Pollution

All the air pollution Directives call for ongoing activity on the part of the authorities to ensure application of the protective provisions which they contain. This applies above all to Directives 80/779, 82/884 and 85/203 concerning air quality, which require measuring stations to be installed in those areas judged by the Member States to be the most polluted.[103] In addition, programmes are to be prepared to reduce pollution as quickly as possible in those areas where the limit values are exceeded or are likely to be exceeded.

The very vague wording concerning the installation of measuring stations has led to great disparity in the number of stations in the different Member States. It

[97] Directive 79/923 on the Quality required of Shellfish Waters, OJEC 1979, No L 281/47.

[98] Directive 80/778 (note 43).

[99] The last Report [the 7th] was published in 1990: Commission of the European Communities, Quality of Bathing Water 1988, Luxemburg 1990, EUR 12579.

[100] Directive 78/659 (note 96).

[101] Directive 79/923 (note 97).

[102] Directive 76/464 (note 86).

[103] See references in note 61.

was already mentioned that while there are over 200 stations in Germany (Directive 85/203), there are only six in the United Kingdom. The clause contained in the Directive stating that the limit values may not be exceeded "throughout the territory" is therefore impossible to monitor. On a number of occasions, the Commission's inquiries as to the level of NO_x or SO_2 in a specific area have received the reply that there is no measuring station in that area.

The problem of pollution reduction programmes in areas designated by the Member States has already been referred to. The number of programmes and their effectiveness in reducing pollution appear to be unsatisfactory. As the annual reports from the Member States on the implementation of the Directives are also late,[104] the extra contribution of the three Directives to reducing air pollution remains limited.

Directive 85/210 on the lead content of petrol[105] requires the supply of lead-free petrol to be evenly distributed within Member States by the end of 1989. Proceedings have been instituted against several Member States which have failed to ensure a balanced geographical distribution. Lead-free petrol has been introduced more rapidly in those Member States where there is a marked price difference between leaded and unleaded petrol.[106]

As regards Directive 84/360 on air pollution from industrial installations,[107] there is not enough coherent and reliable information on the application to new installations of "the principle of the best available technology not entailing excessive costs". Moreover, the Member States have not provided any information regarding the policies and strategies adopted to bring existing installations into line with technological requirements. Any individual case must therefore be examined on its own merits, which proves particularly difficult.

d) Chemicals

The Commission has been making a special effort regarding the Directives in the chemicals sector. It organizes regular meetings with experts from the Member States to discuss matters of a practical and legal nature relating to implementing the Directives. These consultation meetings have apparently resulted in fewer implementation difficulties. The cases which do arise mainly concern access by individuals to information under Article 8 of Directive 82/501[108] or the notification of accidents pursuant to the same Directive.

[104] At the end of 1990 the Commission had adopted three reports on Directive 80/779, two on Directive 82/884 and one on Directive 85/203.

[105] Directive 85/210 (note 21).

[106] The Commission suggested a specific article for that purpose, OJEC 1984, No C 178/5; the Council did not follow this proposal.

[107] Directive 84/360 (note 46).

[108] Directive 82/501 (note 47).

e) Waste

Directives 75/442 and 78/319[109] require Member States to designate the competent authority or authorities responsible for planning operations in a particular area and the content of the plans being defined by the Directives. Where hazardous waste is concerned, only three Member States have notified the Commission of disposal programmes. Germany has forwarded programmes for only some parts of its territory, and even these do not meet the requirements of the Directive. None of the other Member States has forwarded plans.

Directive 85/339[110] requires programmes to be drawn up and implemented in order to cut down the number of containers of liquids for human consumption. Five Member States have not forwarded any programmes, and of those which did, some were very late.

Directives 75/442, 75/439, 76/403 and 78/319 require implementation reports to be forwarded to the Commission every three years.[111] Almost without exception the Member States failed to produce such reports. The Commission therefore sent out a detailed questionnaire to the Member States on each of the four directives. Replies were received from seven Member States and the Commission initiated procedures against the others.[112] The questions asked related mainly to the compliance of the national measures adopted with Community law rather than to the extent to which they were being applied.

Two-yearly reports on Directive 84/631 were due in 1987 and again in 1989.[113] To date, none of the Member States has complied with this requirement.

The Commission has therefore had to rely on complaints, petitions and parliamentary questions, and even on the media, for the bulk of its information on threats to the environment caused by waste disposal. Very often it is a private citizen who, for example, is directly affected by the pollution caused by improper waste disposal, or whose favourite bathing spot is polluted by discharges of waste and who, failing to get satisfaction from the national authorities, submits a complaint to the Commission.

There are clearly very serious problems in most of the Member States as regards applying the Community rules on waste. Most countries do not appear to have detailed plans or programmes for the disposal of waste, hazardous waste in particular, and the existing programmes are not always managed satisfactorily. The

[109] Directive 75/442 (note 49); Directive 78/319 (note 7).

[110] Directive 85/339 (note 28).

[111] Directive 75/442 (note 49); Directive 75/439 on the Disposal of Waste Oils, OJEC, No L 194/23; Directive 76/403 (note 51).

[112] *See for instance* Court of Justice, Case C-48/89, Commission v. Italy, Judgment of 14 June 1990, as yet unreported.

[113] Directive 84/631 (note 52), Article 13.

aim of the Directives, i.e. to ensure the disposal of (hazardous) waste without damage to humans or the transfrontier shipments of toxic waste, is virtually impossible in the absence of precise rules and definitions.

It is therefore hardly surprising that the construction of new waste treatment plants is the subject of controversy among local residents, and that the completion of the internal market is greeted with apprehension as far as waste is concerned. Accordingly, it is essential for the monitoring of the application of the rules on waste to be stepped up at the national and Community level, in order to obtain an integrated Community-wide waste management scheme — which does not exist at present.

V. Monitoring Compliance With International Conventions

As stated above, the Commission does not control the implementation of international conventions by Member States, even where the Community itself has ratified these conventions. An exception is made only in those cases where the EEC has adopted legislation which thus obliges Member States in their turn to transpose EEC law into national law.

It is submitted that the Commission exercises a self-restraint which is legally incorrect. An example might help to illustrate the issue: The Berne Convention on the conservation of European wildlife and natural habitats of 19 September 1979 was ratified by the EEC[114] and by most of its Member States. The Convention requests the Contracting Parties to ensure the conservation of species of wild flora and fauna, in particular those species that are specified in Appendixes I and II (Article 4). The EEC has adopted Directive 79/409 on the conservation of wild birds,[115] but has, until now, not adopted rules on the protection of habitats of other species. The Commission's practice, based on a recital of the decision to become a Contracting Party to the Convention, is that the Commission may well monitor the implementation of the obligations regarding wild birds, but not, for instance, regarding brown bears.

The recital in question reads as follows:

> Whereas the Community will take part in such implementation by exercising the powers resulting from existing common rules and those acquired by it by virtue of future acts adopted by the Council as well as by making use of the results of the Community actions (research — exchange of information) undertaken in the areas concerned.[116]

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[114] Council decision 82/72 concerning the conclusion of the Convention on the Conservation of European Wildlife and Natural Habitats, OJEC 1982, No L 38/1.

[115] Directive 79/409 (note 17).

[116] Decision 82/72 (note 114), recital 5.

Thus, in practice, where the habitat of a brown bear is destroyed in a Member State, the Commission does not undertake any steps and in particular does not start proceedings under Article 169 against the Member State.

This practice seems doubtful. It should first be remembered that since the amendments to the EEC Treaty in 1987, previous disputes about EEC competence as regards nature protection have disappeared, since Articles 130r to 130t certainly give the EEC competence to regulate nature protection questions.

The main argument follows from the nature of the EEC's obligation under the convention. The EEC has promised to take the necessary steps in order to protect the habitats of (amongst others) brown bears. It follows from Article 5 of the EEC Treaty that all Member States are obliged to co-operate to achieve this goal. Article 5 reads:

> Member States shall take all appropriate measures, whether general or particular, to ensure fulfilment of the obligations arising out of this Treaty or resulting from actions taken by the institutions of the Community. They shall facilitate the achievement of the Community's tasks. They shall abstain from any measure which could jeopardize the attainment of the objectives of this Treaty.

By becoming a Contracting Party to the Berne Convention, the EEC has undertaken to take the necessary measures to protect the habitats of the brown bear all over the territory of the EEC. Under Article 5 of the EEC Treaty, Member States are thus obliged, by virtue of Community law, to take the necessary steps in order to allow the Community to honour its obligation deriving from the Berne Convention. Where an EEC Member State allows the destruction of such a habitat, it makes it impossible for the Community to respect its obligation. This is a breach of the obligation deriving from Article 5. Under the general rules of Articles 155 and 169 of the Treaty, it must be possible for the Commission to call a Member State to order where a specific attitude of that Member State leads to a situation which implies a breach of the Community's obligations towards other Contracting Parties under the Berne Convention.

The general power of the Commission is all the more evident if the brown bear example is varied slightly and the case is constructed so that the only habitats of the brown bear within the EEC are located in an EEC Member State which has not signed and ratified the Berne Convention. Under the interpretation given by the Commission, this Member State would be free to completely destroy the brown bear habitats, since it is neither bound by the Convention nor by any rule of EEC law, since no Community legislation for bear habitats exists. Under the interpretation submitted here, by virtue of the Community's accession to the Berne Convention, a Member State is obliged under EEC law (Article 5 of the Treaty) to protect the habitats. The Commission could bring such a case before the Court of Justice under Article 169.

The recital which was quoted above does not contradict this result. Indeed, when the EEC decided to become a Party to the Convention in 1981, the majority of EEC Member States were of the opinion that the EEC had no general competence in matters of nature protection. Since the amendment of the EEC Treaty in 1987 this EEC competence is no longer in dispute, as Articles 130 r to 130 t are very broadly phrased and cover virtually all aspects of environmental policy. Since at least 1987 the recital of the Decision of 3 December 1981 has thus become irrelevant.

Since the protection of habitats is the most serious threat to flora and fauna in Western Europe, it is to be hoped that the Court of Justice will find occasion to express itself on the issue of monitoring implementation of international environmental conventions of which the EEC is a contracting party. One such way could be a preliminary ruling under Article 177 of the EEC Treaty.

VI. Publication: Participation of Non-Governmental Organisations

The correspondence between the Commission and Member States on compliance is not made public. Following some requests made in the United Kingdom, the European Parliament repeatedly asked for the publication of the so-called "compliance letters" i.e. the letters by which a Member State informs the Commission of measures taken to transpose an EEC directive into national law.[117] However, information given to the Commission is most often limited to the transmission of the relevant piece of legislation.[118]

The letters of formal notice and reasoned opinion are not published. Occasionally the Commission publishes a press release on such cases as it considers important. The impact of these press releases is very great, particularly in the United Kingdom with its outstanding, highly sensitive journalism. The decision to refer a case to the Court of Justice follows the same rules.

Since 1983 the Commission publishes annual reports on the implementation of Community legislation, which include a section on environmental legislation, but which do not reveal details.[119]

The whole procedure under Article 169 is thus rather non-public. The reason why the monitoring of EEC environmental policy has received so much public attention these last years is due to two other features: on the one hand there is an

[117] European Parliament (note 3).

[118] The Commission has established a database, CELEX which contains all national implementation legislation and which is open to the public.

[119] 1st Report, COM (84) 181 final of 11 April 1984; 2nd Report, COM [85] 149 of 13 May 1985; 3rd Report, OJEC 1986, No C 220/1; 4th Report, OJEC 1987, No 338/1; 5th Report, OJEC 1988, No 310/1; 6th Report, OJEC 1989, No C 330/1; 7th Report, OJEC 1990, No C 220/1.

internal instruction by the Commission that each complainant is entitled to receive an acknowledgement of receipt of his complaint.[120] Furthermore, the complainant is to be informed of any decision which the Commission has taken in his case. In this way, complainants in environmental cases are informed whenever the Commission has dispatched a letter of formal notice or a reasoned opinion or when a case was referred to the Court of Justice.[121] It is up to the complainant to decide what use he wants to make of this information; and in Member States where the media are open to environmental issues, the public debate can have an enormous influence on decision-making procedures.

The second reason for public attention is the watchdog rôle of the European Parliament. Not only has Parliament constantly — though until now unsuccessfully — urged the Commission to change its internal rules and publish letters of a formal notice and reasoned opinion.[122] Members of the Parliament also keep asking written or oral questions on procedures under Article 169 enquiring about advances in the procedures, thus compelling the Commission to inform the public about pending files.

In 1990, Mr *Ripa di Meana*, the member of the Commission responsible for the environment, presented to the public a "first Commission report on the implementation by Member States of EEC environmental law", in which he gave, Member State by Member State, information about the decisions which the Commission had taken under Article 169.[123] The relevant data published were the following:

Decision to Open Article 169 Procedures as of 31 December 1989

Member State	Absence of communication of national measures	Incomplete or incorrect transposition of national legislation	Bad application in practice	Total
Belgium	11	10	26	47
Germany	4	14	11	29
Denmark	1	-	4	5
Spain	4	16	38	57
France	1	12	28	41
United Kingdom	4	6	21	31
Greece	12	2	31	45
Ireland	5	4	9	21
Italy	8	7	25	40
Luxemburg	3	4	5	12
Netherlands	4	14	6	24
Portugal	3	2	9	14
	60	90	213	362

Procedure under Article 169 on 31 December 1989

	Letter of formal notice	Reasoned opinion	Referred to the Court	Total
Belgium	27	8	11	46
Germany	13	8	8	29
Denmark	5	–	–	5
Spain	45	9	3	57
France	28	6	7	41
United Kingdom	18	8	5	31
Greece	37	5	3	45
Ireland	16	5	–	21
Italy	17	16	7	40
Luxemburg	9	2	1	12
Netherlands	18	5	2	24
Portugal	10	4	–	14
	242	76	44	362

Sectors

Member State	Water	Air	Waste	Chemicals	Noise	Nature	Total
Belgium	11	3	18	5	2	7	46
Germany	9	4	2	3	–	11	29
Denmark	2	–	–	–	1	2	5
Spain	12	2	10	4	–	29	57
France	15	3	2	1	–	20	41
United Kingdom	16	5	3	3	–	4	31
Greece	10	4	6	2	3	20	45
Ireland	7	2	3	2	–	7	21
Italy	9	4	10	2	3	12	40
Luxemburg	5	2	2	–	1	2	12
Netherlands	6	2	2	3	3	8	24
Portugal	2	1	4	–	–	7	14
	104	32	62	25	13	129	362

[120] See complaint form OJEC 1989, No C 28/6.

[121] See previous note.

[122] European Parliament (note 3).

[123] Commission document P-5 of 8 February 1990; it should be noted that the figures refer to decisions taken, though not necessarily executed (yet).

This report produced strong reactions in the media in every Member State[124] and from the 12 governments, though nobody seriously contested the points made in the report that

(a) Community Directives on the environment are not properly applied by the Member States;

(b) the quality of the environment is deteriorating and the Community legislation which should be protecting it is failing to produce satisfactory results.

Whether, in view of the different reactions, there will be a second report on the implementation of environmental law in 1991 is, as yet, uncertain. It is not clear either, to what extent the discussion on access to environmental information will influence the degree of transparency of Article 169 procedures.[125]

There is no specific ruling on the participation of environmental organisations in the Article 169 procedure, though it is true that many complaints are introduced by local, regional, national or international environmental organisations. These organisations have specific means for selecting complaints and influencing the media in order to make the complaint procedure part of their campaign. Their activity in matters of enforcement is without doubt very seriously hampered by the limited transparency of procedures. Geographically, marked differences exist, such as for instance, numerous complaints from Spanish environmental groups and very few complaints from Dutch organisations.

VII. General Conclusions

The attempt to systematically monitor the implementation of EEC environmental law by Member States had a number of rather important consequences. Despite the somewhat limited publicity which surrounds the procedures, public opinion has become aware of the possibility of taking action against environmental degradation, contamination or pollution. While in some Member States pollution was, and partly still is, considered to be some "act of God", the possibility of sending complaints to the EEC Commission and having a local environmental problem examined, has promoted awareness and increased sensitivity. The Commission was seen rather as a central body, capable of even taking a stand against

[124] *See for instance: Pietrro Sormani*, CEE, i "cattivi" dell'ecologia. La leadership negativa die Spagna, Belgio e Italian, in: Corriere della Sera, 9 February 1990; *Alan Hope*, Britain Heads EC Pollution Culprits, in: The Guardian, 9 February 1990; La Belgique montrée du doigt par la Commission, in: La Libre Belgique, 10-11 February 1990. In France, a Parliamentary Committee made a special report to the Parliament on the findings, Assemblée Nationale, Annexe au procès-verbal du 26 June 1990, Doc. No. 1535.

[125] In 1990 the Council adopted Directive 90/313 on access to environmental information, OJEC 1990, No L 158/56; the Commission committed itself to making a proposal for extending these rules on Community institutions.

national administrations — a possibility which the public does not seem to have in all Member States. The turning of "soft law" into hard law and the application of Community Directives as rules of binding law rather than as some form of recommendation has probably surprised many local, regional and national administrations. This process of integrating Community environmental law into national environmental law is far from being completed. Furthermore, many administrations were not accustomed to seeing their practice being questioned by an outside body and having to justify why this or that authorisation was given, or this or that habitat destroyed. This challenging of administrative sovereignty was, at the same time, a monitoring of the EEC environment despite national sovereignty. Generally, it can be said that Member States accepted the Community monitoring process, since it also brought advantages: for instance, central environmental administration was made aware of imperfect implementation at the local level, or it was able to successfully argue an environmental case against other, more powerful departments of the same administration, using the Commission's letters as support for its own arguments.

Other aspects were also important, for instance, changes of national legislation in order to adapt it to EEC environmental requirements; or the preventive effect which a threat to expose the Member State to a sort of a public blame from Brussels inevitably had. If it is true to say that environmental protection profits most from public awareness and public participation, the media echo brought about by decisions from the EEC Commission may have contributed to avoiding some deterioration of the environment.

The monitoring process went so far as to influence the form of environmental law-making. The most obvious evidence for this is the gradual reduction in the use of circulars. The fact that more and more regulatory instruments are used demonstrates a growing maturity of EEC environmental law. Other notable changes concern the content of legislation and its application in practice which became more similar from one Member State to the other than would have been the case without the EEC monitoring procedure. Also, the evidence that quality objectives can hardly be monitored and are, in fact, almost never monitored in Member States will undoubtedly have some impact on legislators. Lastly, more attention is being given at the drafting stage of EEC legislation to how it would be implemented in practice.

The specific nature of Community environmental law also creates a number of problems for monitoring its implementation, some of which are enumerated hereafter. Procedures take a very long time and all too often the damage to the environment is irreparable by the time EEC steps in. Part of the delay is due to the fact that all correspondance with Member States has to pass the Permanent Representations of Member States with the EEC. No direct contact with polluters or local authorities, although it is possible would allow much quicker action. In

decentralised Member States this often causes a very serious problem, all the more so when relations between central and regional levels are difficult.

A further major hindrance to promoting efficiency is that of administrative secrecy. The whole procedure under Article 169 is largely non-public or even secret. Since the Commission does not have inspectors of its own, it must rely largely on the complainants' arguments and the administration's reaction. It is often doubtful whether these two sources of information are sufficient to assess a situation properly. Mobile measuring stations and inspectors would probably be very useful in two-thirds of all complaints. Their absence is felt very heavily.

To these problems must be added that of the absence of sanctions. It is well known that a number of Member States quite openly do not respect Community law requirements. In his first implementation report,[126] Commissioner Ripa di Meana expressly mentioned implementation of Community rules on waste in Belgium and Italy. Indeed, an important number of Court descisions have come out against these Member States — apparently without much success. Other Member States disregard some directives for years without being sanctioned. Public blame is almost the only sanction, and even that needs reception by the media in order to condemn the action.

Access to national courts in environmental matters is very difficult in practice because of the limited right to bring an action and the high costs involved. The EEC complaints procedure might be some substitute for that fact; however, it remains impossible for the future to properly monitor all upcoming complaints — which might well exceed 1000 per year. Some form of decentralisation will thus be necessary, for instance, in the form of a national complaints-handling system.

The punctual action undertaken by the Commission can be and is successful in some cases, leading to changes in legislation or to changes in practice. However, this action is unable to remedy any weakness in the environmental infrastructure of a Member State. Where an administration sees environmental impact assessments, protection of habitats, reduction of emissions to air, soil or waste as a nuisance, which is still sometimes the case, the Commission's intervention under Article 169 is likewise seen as a nuisance rather than as an opportunity to properly protect the environment — and to properly respect legal obligations under the EEC Treaty. And, while Community intervention might be supportive to the environmental administration at a local or regional level in the discussion with other administrations, it cannot permanently establish a balance in the influence of these different administrations.

The implementation procedure does not contribute greatly to the establishment and implementation of clean-up plans and programmes either. Where a national administration is not able or not willing to honour the corresponding

[126] Commission (note 125).

commitments under EEC environmental legislation, it is normally extremely difficult to change such an attitude.

This then brings back the question raised at the beginning of this article: Can the EEC implementation and enforcement procedure contribute some form of model for other regions in the world?

All direct or indirect criticism voiced in this article should not let us forget several major advantages which the Community's implementation actions in the environmental sector have brought about and which are essentially the following:

(1) There is a "central" body which looks into national environmental legislation and — at least as important — into environmental practice in order to level its compliance with EEC environmental rules. Neither national parliaments nor national administrations thus necessarily have the last word on environmental issues;

(2) Controversies are decided by the Court of Justice, which is highly respected and has sufficient authority for its judgment to be accepted;

(3) Individuals may raise the question of the compliance of any measure with Community environmental rules and have a guarantee from the Commission that their case will be examined. Thus, they no longer regard environmental pollution as an "act of God", but become aware of the possibility of protecting "their" environment.

(4) The European Parliament's activities, the Commission's own initiatives, as well as actions from non-governmental organisations contribute to bringing cases of non-compliance to the attention of the public. This feature, which is linked to the functions of public opinion within the EEC Member States, is environment's greatest potential ally.

(5) Administration in Member States is gradually accepting that its environmental actions can be questioned by the EEC administration. Thus, not only does environmental law-making go beyond the nation-State, but so does implementation control.

Major deficiencies in the procedure are the absence of inspection possibilities on the one hand and of sanctions on the other. Both deficiencies would not be too important if, at the level of all Member States, inspection facilities existed and appropriate sanctions were practised — which is the case only in a minority of Member States.

In the competition area the Commission has managed to obtain inspectors who control the compliance with Community competition rules all over the EEC. The Commission itself has the power to pronounce sanctions against breaches of competition laws. Should it one day be possible to obtain inspectors and sanction facilities to monitor compliance with Community environmental law, then the

"Ombudsman rôle" of the Commission in favour of the environment would be considerably strengthened. At that moment, the implementation control could serve as an example for other regional organisations in the world. It seems fair to say, though, that the EEC has already gone far in its attempt to make environmental legal rules work in practice.

ENVIRONMENTAL ENFORCEMENT IN CENTRAL AND EASTERN EUROPE IN TRANSITION

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SUMMARY

This paper presents an assessment of the current status of environmental enforcement in Central na Eastern Europe and the challenges facing those trying to improve upon current strategies and approaches. The discussion is based upon analysis of environmental law in Czecho-Slovakia, Hungary and Poland. Different approaches undertaken by those countries are discussed regarding institution building and law making. The environmental law and related institutional system is built upon a framework of environmental laws (CSRF and Hungary) or from detailed regulations (Poland).

1 INTRODUCTION

Environmental enforcement has become of great importance in Poland during the Solidarity's Round Table Debate with Communist Goverment in Spring 1989. This issue was one of the most discussed at that time and it was repeated in other countries of Central and Eastern Europe during their transformations. Central and East European countries, that for many years were ruled by communists, now are struggling for a new future based on human rights, a market economy and a modern legal system [1,2].

Heavy industry, the hearth of the working class, was declared under old regime to be the key sector of communist economy and was to be protected at any price [2]. The law makers therefore put more wishful statements into environmental laws than real rules that might disturb the realization of socialist five year plans. Environmental law was then to show, that communist governments like others, after the series of UN conferences in early seventies, care for the environment. They did, by setting permissible levels impossible to comply with.

Information about the state of the environment was to be a secret though no real use of it was possible to enforce obeying the law. The public knew about the state of the environment and its influence on human health only from unofficial sources - the environmental groups. After the democracy revival in all Central and East European countries environmental issues became one of the most important political issues. People wanted to know officially as much as possible about the state of the environment, public health and risk caused by environmental pollution. The information caused great political pressure within communities end forced policy makers to set new environmental laws. In all countries it opened wide debate about the set of rules and principles to be adopted within the system of laws:

- environmental liability,
- polluter and user pays principle,
- prevent before cure principle,
- public participation in decision making and public right to know,
- decentralised integrated environmental management based upon selfgoverning principles.

The ways to achieve the goal are different in every country of Central and Eastern Europe. It is done either by setting general system of principles and rules, from which detailed laws are to be derived (Czecho-Slovakia) or by synthetizing the general system from detailed described laws (Poland and Hungary) [1,3].

2 ENVIRONMENTAL ENFORCEMENT IN CZECH AND SLOCAK FEDERAL REPUBLIC

State of the environmental law in Czech and Slovak Republic (CSFR) is imposed by recent events and separative tendencies. It may happen, that there will be two separate countries in this part of Europe, having separate legal systems.

In April 1991 the Federal Government published a State Program of Environmental Protection which defined polices to be adopted at republic and federal levels. Among others there were listed issues concerning environmental laws and regulations, monitoring and information systems and economical instruments to be applied to achieve reduction of environmental pullution. Later on, in December 1991 there was issued a Federal Environment Act which since the beginning of 1992 is the framework for environmental legislation. The Act adopts principle of sustainable development and puts responsibility on every citizen regarding care for the environment. In the Act there were also adopted other principles like "polluter and user pays".

Enforcement of environmental law in CSFR is based on a fine and penalty policy. Penalties and fines till 1991 were too low to make any real reaction of violators. According to a new law fines were raised several times especially regarding air pollution. The Act from 1991 introduced fee instruments to enforce and to encourage actions toward reduction of environmental pollution. Czech and Slovak republics have established funds for environmetal protection, created by fee and fine collection.

The responsibility of environmental policy is put on three organizations: the Federal Committee for the Environment, the Czech Ministry of the Environment and Slovak Commission for the Environment. The Federal Committee is responsible for the preparation of law on the federal level and international harmonization of the environmental policy. The Czech Environment Ministry acts through the Czech Inspectorate and its district, municipal and community offices. The Slovak Commission acts according to the same system. The republics have the right to adopt stricter standards. The responsibility for the environment in Czecho-Slovakia is put on many other agencies and ministries depending upon the protected component of the natural environment. Environmental law in Czecho-Slovakia is made according to a systematic approach regarding institution building which tends toward concentration of efforts and derives the system from general framework of law. The legal system is being built based upon general principles. The development of the system is made by creating of detailed regulations on water protection, environmental impact assessment, forest protection, waste regulation (management) and air protection.

3 ENVIRONMENTAL ENFORCEMENT IN HUNGARY

Environmental legislation in Hungary has on one hand a long tradition connected with act from 1729 issued by Karl III or act on water protection from 1840 and on the other hand - a relatively short tradition due to exclusion of environmental issues from national policy by communist rulers. After the replacement of communist government, environmental issues began to play an important role in Hungarian policy. In September 1990 the Ministry for Environment and Regional Development issued a program for environmental protection in which there were outlines of required changes in the legislation. The system of laws regulating environmental protection in Hungary now consist of many datailed acts on air, water, solid and hazardous waste and land use. Environmental Protection Code is under discussion and it is intended to include articles on environmental liability, economic instruments, emission tradings, principles and rights.

Before 1990 enforcement of environmental laws in Hungary was ineffective because all responsibilities were put on industrial management. Nowadays this responsibility is put on National Environment Protection Directorate, created in 1990, which acts through its 12 regional directorates and local governments. The Directorate is an agency of Environment Ministry. Regional directorates are responsible for issuing permits, imposition of penalties and fines and the enforcement of environmental regulations. Money that is collected by regional directorates create a Central Environmental Fund. In Hungary there is a separate administrative structure that

have responsibilities in water management in 12 regional offices. Environmental enforcement in Hungary is in its beginning.

4 ENVIRONMENTAL ENFORCEMENT IN POLAND

The first complex environmental law was set in Poland in January 1980. The enforcement issues were included in that Act by defining the role for National Inspectorate of Environmental Protection (PIOS). The power of then PIOS was weak and therefore in 1991 a new law was adopted providing POIS with a real enforcement power. The PIOS acts on behalf of the Minister of Environmental Protection, Natural Resources and Forestry through the Duputy Minister - Chief Inspector of Environmental Protection. The PIOS acts through Inspectores at voivodship level. The Inspectorates have the right to stop activities and operations endangering the environment, ban the sale and import of goods that do not meet national standards, act in case of extraordinary environmental threats and is responsible to keep the public informed on the state of the environment. To reinforce the action the Inspector co-operates with prosecuting authorities, state administrations, municipal selfgovernment and public organizations. PIOS is separated from viovodship administration. In cases of violation of a given emission permit the Inspector imposes a fine on the polluter or causes criminal prosecution. Environmental Inspectorate is also responsible for environmental monitoring related to country wide system.

Environmental law in Poland is enforced by fee and fine policy. Every facility must possess emission permits according to which the voivodship administration imposes a fee for use of natural resources. The permits are issued by the Voivodship administration that collects fees for use of natural resources and fines for violating a given permit. The Voivodship administration is also responsible for coordination of all efforts relating planning of investments in environmental protection, research, regional environmental monitoring and co-operation with environmental authorities and organisations.

The emission permit is defined during the negotiations at the voivodship administration in presence of facility's management, PIOS, representatives of municipal authority, NGOs and potentially endangered public. Each permit is given with respect of national environmental policy and respective limits. The permit is issued after closure of an administration proceeding. If during the proceeding a consensus hasn't been obtained, every party in the negotiation, not satisfied with the result, has a right to appeal to the Ministry of Environmental Protection and finally to the Suprime Administration Court. During appeals, the administration proceeding is suspended. It happens, that management of given facility utilizes all rights to appeal and this way reaches prolongation of the proceeding. After validation of the permit it is possible to impose a fee or, in case of proved violation of this permit, a fine can be imposed.

At the local selfgovernment level the involvement in environmental issues is at present low although the municipalities are responsible for ensuring proper water and waste management, heat supply and greens keeping. Present debate on regionalization incorporates environmental issues as a right to develop regional environmental policy. This is also the decentralization issue being discussed in every country of the Central and Eastern Europe as the reaction to a central ruling.

System of environmental laws in Poland is created from the opposite side in comparison to the way it is done in Czecho-Slovakia - from very detailed laws efforts are made to derive a synthesis incorporating all assumtions and principles.

5 ENVIRONMENTAL PROGRAM REQUIREMENTS AND THEIR IMPLEMENTATION UNDER THE OLD SYSTEMS

In all countries of Central and Eastern Europe the official policy regarding environmental protection was more aiming to desired economic growth and image creating of the communist governemnt than a real action plan for environmental protection. In such circumstances there was no place for real enforcement and compliance issues.

The priorities of environmental policy were set by the central planing authority that was taking into account the communist assumptions of social development rather than any modern environmental policy. This led to the environmental policy resembling. This sort of policy making resulted in environmental liability and built up industry.

As it has been described above, the regulated universe was intentionally made to be weak. In Hungary after World War II it was officially declared, that there was no place for environmental protection because the country had to build economical power by growth. A similar approach was obligatory in other countries due to forced symmetry in policy making under Soviet Union control [2]. The system began to change after first UN declaration on environment (U'Thant). Those issues were then raised later on during strikes in Poland in 1980 - the year of issuing first complex environmental law. In Poland enforcement and complioance issues were introduced into the law - there were proposed enforcement institutions, legal and financial instruments. In Czecho-Slovakia enforcement was limited by unclear competence division between Federal and Republic's Governemnts and respective ministries [1,3]. It was difficult to determine who had been responsible for what. In Hungary the only actions undertaken were related to national budget planning in which there was money reserved for environmental protection as a grant for a particular facility. This money was usually used for general inwestments with less respect to environmental protection [1].

Environmental requirements and related payments (fees, fines and penalties) were set artificially low. Low permissible levels were impossible to comply with and at the same time the payments were set low and created no enforcement feedback. The management of industry was then mainly interested in growth of production. Promoting compliance under previous regulation was difficult, although in some cases effective. The most effective instrument to promote compliance behavior was related to issuance of permits and setting up allowable emissions (Poland) and announced growth of related fees. At the beginning there was no reaction. From 1990, when fees and fines were raised several times, the users energetically began creating action plans. Nowadays from fee and fine policy there is derived financial incentive instrument based on tax principle: the user declaring action toward cleaning the technology, has right to utilize their own fee for investment. It is done by separate agreement included to the administration permit [4].

The system of compliance monitoring has been based upon routine audits done by the governmental administration in Poland and by respective ministers in Czecho-Slovakia. In Poland the compliance monitoring under previous regulation was the responsibility of governmental administration (voivodships) and PIOS - the National Inspectorate for Environmental Protection. Examples of environmental requirements and their implementation in reference to each element of the general framework identified under Speaker #1 and the ability to take action to ensure compliance, both regulatory and financial. There was no such service in Hungary under old regime [3].

6 NEW CHALLENGES UNDER TRANSITION TO A MARKET ECONOMY

The system of environmental laws still require improvement regarding permissible levels of emmision and allowable emission and related fees for use of the environment and fines to be payed after proven violations of given permits. All those values shall be set at levels possible to enforce as relates to allowable pollution and possible to bear by users as relates to fees. It is agreed by all, that fines and penalties shall remain at its high levels. Wrong values require later adjustments that spoil the proceedings.

Environmental policy in East and Central European Countries require modern laws derived from their national constitutions. The governments of the countries discussed in this paper issued their environmental policy documents and declared following the sustainable development, decentralization of decision making, set up the priorities and accepted general principles. Rebuilding of legal systems related to environmental protection shall be done paralelly to the improvement of the state organization and require simultaneous action in:

- adjustment of the area of activity of different environmental administration to the territorial division of the country. This will lead to the concentration of means and efforts according to harmonised policy, facilitate the coordination and shorten the proceedings,
- clarification of environmental administration system at all levels and decentralization of decision making, environmental found creating and development of environmental policy,
- adjustment of standards relating emissions and effluents to those which are applied in Western Europe and WHO,
- the state policy shall consequently apply pricing policy promoting clean technologies, clean fuels (unleaded gasoline)
- emission trading shall be taken into consideration and applied primarily in areas of dense concentration of industy,
- environmetnal health monitoring and risk assessment, - environmental impact assessment.

International cooperation and common environmental policy in Central and East Europe require:

- unification of metrology as applied in environmental monitoring,
- creation of information system on the state of environment,
- joint environmantal studies and programmes like Black Triangle or Silesia.

The countries of Central and Eastern Europe will not be able to solve their environmental problems without external contributions to their action plans. It is therefore required to introduce incentive instruments that will facilitate privatization, attract foreign capital and accelerate the renovation and restructuring processess:

- environmental liability must be clearly defined in law,
- taxation policy shall allow tax reduction for those investing in environmental protection. The same shall be applied to the custom policy,
- fee collection shall permit internal use of part of the amount due payed be the user, according to separate agreement reached during administration proceeding.

The general concern for environment is due to open market competition, privatization and related problems with environmental liability. The trend related to support and environmental concern is growing. Market economy forces the managers to evaluate costs when taking into account a fee and eventual fine, with no financial intervention of central government, the managers became more interested in diminishing the cost and avoding an eventual penalty. On the other hand some incentives are provided based upon environmental funds, that are the source of soft loan for environmental investments.

7 SPECIFIC EXAMPLES OF CHANGING CIRCUMSTANCES.

After the Round Table Debate (RTD) in Poland in 1989 began a decentralization of governmental system. The municipalities became independent from the state goverment according to Selfgoverning Act. In the field of environmental protection appeared new partners developing their own environmental policy based on the own financial means. The issue of public participation, raised during RTD, resulted in permanent attendance of the representatives of NGO's, municipal selfgoverment and endangered public in the administration proceedings.

During this transition period there is an observed process leading to separation of different regulatory and enforcement bodies in Poland and concentration of efforts within one institution in Czecho-Slovakia and Hungary. The process is strongly influened by the political environment which in Czecho-Slovakia leads to a division of the state, in Poland leads to a new regional division and in Hungary - to problems related to Danube dam.

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ENVIRONMENTAL ENFORCEMENT IN HUNGARY - TODAY AND TOMORROW

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SUMMARY

At the time of the present Conference, nearly two years has passed since the **European Council of the European Community** released the declaration **The Environmental Imperative** signed in Dublin in 1990. The declaration underlined the following among global issues:

> "The environmental situation in Central and Eastern Europe presents special challenges. We endorse the agreement reached in Dublin on 16 June 1990 between the Environment Ministers of the Community and those of Central and Eastern Europe on the steps to be taken to improve the environment in Europe as a whole and in Central and Eastern Europe in particular. Remedial measures must be taken by these countries to clear up problems which have developed through years of neglect and to ensure that their future economic development is sustainable." (1)

The above statement is still in force, and we in Central and Eastern Europe (CEE) are not much closer to the fulfilment of overall or even partial environmental requirements than two years ago. If we examine the state of environment in today's Hungary then - being a bit cynical - the slightly positive changes are more or less due to the economic difficulties effecting a number of polluting facilities. (E.g. the use of chemicals in agriculture is much less than ever before because of the great rise of chemical prices due to the cancellation of state subsidies to the chemical industry.) The general political, economic, technical, organizational and legal background of Hungary is not very favourable to environmental protection interests. Before going into the specifics of environmental enforcement in Hungary, it is important to examine some of these background issues in order to get a more complex view of the present situation. The following is a list of advantages and disadvantages to environmental protection of these background issues.

1 INTRODUCTION

1.1 Policy Issues (Past and Present)

Advantages

1.1.1 In developing a **multi-party system and a rule of law,** there is a better chance for environmental interests to be emphasized. Some political parties, movements (and even the church) can incorporate environmental demands in their campaigns, which may provide a mutual benefit to both the movements or parties and the environment.

1.1.2 The **program of the new Government** (2) was adopted in summer 1990. Although it focuses primarily on economic issues, Chapter V is dedicated to environmental protection requirements. Based on this Program, the Environmental Ministry in the same year made a detailed plan of action, the majority of which has not yet been fulfilled.

1.1.3 Our **international commitments** are more and more favourable for the environment. For example the convention on transboundary impact assessment (Espoo, February 1991) and the association agreement with the European Communities gives priority to environmental interests.

Disadvantages

1.1.4 The relationship between **economic and environmental priorities** in policy-making even today puts a greater emphasis on economic interests than environmental ones.

1.1.5 A concrete **environmental policy and strategy** - going beyond a set of mere statements - **is missing** both in national or regional policy and also on the party-policy level.

1.1.6 Due to the preceding point **environmental protection in the regulatory arena** has always been - and in most cases still it is - mere **"show-business"**. It declares a concern for protection rather than creating a real set of political, economic and legal requirements. The environment became a top issue in international cooperation, so the government had to respond to this (3).

1.1.7 The transition process has resulted in numerous political, social and economic problems especially related to **social security and unemployment** concerns. These run against the interests of environmental protection.

1.2 Economic Development

Advantages

1.2.1 For the most part, the state is no longer both the potential polluter and the responsible regulatory and controlling administration. Thus there now is a greater chance for enforcing environmental requirements.

1.2.2 The market economy and consumer policy together may have a **self-monitoring and regulating** effect (E.g., the prices of raw materials and energy).

1.2.3 There is a greater probability that **an environmental - or energy saving, recycling etc. - industry and services** shall be developed as a response to new environmental regulations.

1.2.4 Foreign trading relations have a big impact on environmental protection. Western product criteria and environmental requirements may encourage Hungarian industry to use for example EC standards though they are not incorporated into the Hungarian regulatory system.

1.2.5 There is now a chance to develop market economy and environmental protection in harmony, which has never existed before.

Disadvantages

1.2.6 There is a tendency to connect stricter environmental regulations with a later stage of economic development - **when "we can afford it"**.

1.2.7 A market economy is not an absolute self-controlling mechanism in the interests of environmental protection. The effect of a **market economy** is very ambigous and partly may be favourable for environmental protection interests (e.g., shutting down polluting industries or developing market incentives), but can also be damaging to the environment (e.g., increased emission also occur together with growing production or the incapability of former state industries to clean up polluted sites).

1.2.8 The necessary **economic incentives for environmental protection are missing** from Hungarian economy, as well as an understanding of the **role of economic management in environmental protection**. To this we must also add the new prospects in privatization, joint ventures, concession licences and compensation for past nationalizations, all representing primary parts of the economic program, but all without reference to environmental impacts.

1.2.9 The involvement of foreign money is directly connected to the new phenomena listed above, especially privatization. In order to attract foreign money the economic management is willing to ease environmental criteria.

1.2.10 It is clear that our own resources are not enough for both pollution prevention and remediation, so the setting of priorities is an essential requirement at this level also.

1.3 Technological Challenges

Advantages
1.3.1 The development of foreign trade and the involvement of foreign capital and technology provide a better chance for the financing and use of cleaner technologies.

1.3.2 A great portion of the present technological infrastructure must be modernized in order to make the economy competitive. This may mean again the use of cleaner technologies.

1.3.3 The relatively inefficient monitoring capacity is more and more improved due to foreign assistance projects (e.g., PHARE).

Disadvantages
1.3.4 Hungary's present **technological resources** are not sufficient enough to meet the requirements of environmental protection, and will not be changed substantially in the near term.

1.3.5 The monitoring and information systems in Hungary are less developed - a good example is the difficulty of our telecommunication system.

1.3.6 The training of special environmental experts is developing. This is still only on the post-graduate rather than the graduate level, so it is less for general environmental skills than for specific ones.

1.4 Environmental Legal Issues in General

Advantages
1.4.1 The **legal system needs overall restructuring**. This does not simply mean several amendments, but rather means to rebuild the old system from the ground up. There is a great chance to incorporate environmental interests while developing the whole system.

1.4.2 The amended Constitution contains the **right to environment** as an obligation of the state.

1.4.3 The creation of a rule of law state means a broader sphere of **judicial review** over legal regulations (Constitutional Court), and administrative decisions, and a greater role of the judiciary in general. All of these serve to guarantee the constitutional rights.

1.4.4 There is a **separate ministry for environmental protection** with a system of national and regional offices. This dates back to 1988, but was substantially restructured in 1990. It is now called Ministry of Environmental Protection and Regional Policy.

1.4.5 The creation of the **local (self-) government system** offers a greater possibility for the protection of local environmental interests and also can serve as one representative of the public interest.

1.4.6 There are a number of regulations in the present legal system (discussed later) which could serve the interests of environmental protection without any or with only some minor adjustments.

Disadvantages

1.4.7 In spite of the difficulties in developing clean technologies, these technical solutions had always been emphasized instead of regulation and enforcement, as the latter would have needed direct responsibility from the state organs.

1.4.8 Due to the total reshaping of the legal system its **internal harmony** is and will be missing for a longer period.

1.4.9 The creation of a rule of law state results in a number of **uncertainties** as to the relationship, organizational structure, and division of power of the different actors (4).

1.4.10 Some major environmental elements are governed by central administrative agencies **other than the environment ministry without the necessary coordination**. In addition, the environment ministry has a number of other tasks that are sometimes in contradiction with its environmental role. Further, the basic goal of separating the management/use and the protection of a given resource is not always met.

1.4.11 Additional difficulties have developed with the division of public administration tasks between the central, state, and local (or self-) governments.

2 OPTIONS OF ENVIRONMENTAL ENFORCEMENT - PAST AND PRESENT

2.1 Environmental Enforcement Policy

The first question is to find out whether anything like an enforcement policy or strategy does exist or not in Hungary as this policy should govern the would-be enforcement activities. If we examine the 16 years which since the general act on environmental protection (5) was passed, it is quite difficult to prove the existence of such a policy. The reason lies in the fact that the manager of the polluting activity and the organ responsible for environmental protection in at least 95% of the cases was the same - the state. No wonder why there was little emphasis on enforcing environmental regulations. Today the situation is a bit changed, but more than 80% of the Hungarian economy is still in state ownership, and there are also a number of other competing interests, as was shown in the first chapter.

The conclusion is that there was and there is **no general environmental enforcement policy in Hungary.** Nevertheless there have to some extent been some attempts towards such a policy. The first example is the strategy to save **Lake Balaton**. The establishment of this strategy dates back to the end of the 1970s, but was mainly active in the beginning of the 1980s. The poor water quality of the Balaton area proved to be dramatic, due primarily to three main reasons: the artificial drying out of the natural filter wetland area at the mouth of the main river flow; the extensive construction of holiday houses without sewage treatment facilities; and also the widespread use of chemicals in agricultural production. The steps taken to restore the lake include the restoration of the original wetland, the construction of sewage treatment plants, and the establishment of limits on building and farming. The results demonstrated the effectiveness of a combined environmental enforcement policy. The Balaton project has been the only example of such a complex and successful project up till now (6).

Second, in the mid 1980s the (so called) environmental policy program selected three major areas of future activity based on the priorities of environmental problems: air pollution, water pollution and hazardous wastes. These priorities, however, did not really serve as the basis of an enforcement program due to the general lack of willingness. A good example is the case of investment in one of the biggest hazardous waste deposit sites in Hungary - at Aszód. Here the new 1988 taxation system - which did not differentiate according the purpose of an investment - increased the costs of the waste site by several million forints, causing a lack of necessary financial resources for the project. The harmful taxation system was changed only two years later.

A last example is the obligation of the larger towns like Budapest to develop their own emergency plans and standards for air pollution. These plans were not complex enough - Budapest would like to adopt a new and complex plan only this year. In addition, the immission (ambient) standards were set so high that even pollution exceeding the public health standards would not be deemed sufficient enough to warrant emergency action.

2.2 The System of legal Measures - Regulation

One of the most important questions of enforcement is whether the legal instruments provide a sufficient basis for enforcement actions. The relevant legal measures can be observed in two groups. The first is the general substantive law, containing all the instruments and measures giving rise to an enforcement activity or compliance, and the second represents the special rules for the different environmental elements (7). The **Act No.II.of 1976 on the protection of human environment** lists six environmental elements: land, water, air, flora and fauna, landscape, and settlement environment, where the latter covers all those possibly harmful activities (from waste to noise) which may have an impact on the given residential, recreational, industrial, community etc. environment. As the enforcement tools are common to all the environmental elements and are in the first target group, the different environmental elements are out of our interest now.

The environmental regulations will set the framework within which the different elements of environmental enforcement - described in point 3 - may find their role and their relationship to each other and to the given environmental policy. The basic concept of environmental regulation appears in the right to environment, therefore the following evaluation will also be started with this. The legislation means the higher level of regulation and the executive rules are manifested in standard setting - meaning the high level of technical rules - and in the administrative regulation. This latter is discussed under the next part in connection with the other elements of administrative law.

2.2.1 Right to Environment

The best reflection of a basic philosophy of how to regulate environmental protection (8) is the regulation of the right to environment (but of course only if we take human rights issues seriously). The 1976 Act granted to every citizen the right to live in an environment worthy of man (9). However, this right has not been interpreted in practice by a court.

The Constitution was amended in 1989 with the assumption that constitutional rights in the future would serve as the basis of legal action. This Constitution regulated the right to environment in two relatively different ways.

Article 18 grants a separate right: "The Hungarian Republic recognizes and enforces the right to a healthy environment for everyone."

Article 70/D treats this right as a tool for ensuring the highest possible level of physical and mental health. In addition to protecting the manmade and natural environment, this right is ensured by organizing a labour safety system, public health institutions and medical care.

The first of the above mentioned two articles **is a direct adoption of a right to environment**, not only for the citizens but for everyone. This article clearly expresses that the State is responsible for ensuring the implementation of this right, even within an international aspect as it is the only way to ensure the rights for "everyone". The Government, however, has turned to the Constitutional Court to ask for an interpretation of this article to determine whether it really is a primary obligation of the State.

2.2.2 Legislation

The tasks of rulemaking in environmental protection, as in other continental legal systems, are divided among the parliament, the government and local governments. In response to the last 45 years, the new Parliament wishes to regulate all the important questions of the legal system itself. This is a great burden if we look at the necessity of reconstructing the whole legal

system (see 4.1, above.) This legislative burden can only be alleviated by setting priorities and regulating according to these priorities. Unfortunately, because of a number of reasons (see, e.g.,1.7., 2.5. and 4.7-4.11, above), environmental regulation is only a priority on paper. The ministry program mentioned above listed a wide range of topics to be regulated in 1991, including environmental impact assessment and the general act on the protection of environment. However, in 1990 and 1991 there has not been any major environmental regulatory steps.

In environmental legislation we are now in a very beneficial situation, namely trying to formulate an overall and comprehensive environmental law that covers the main legal measures and therefore also serves as a basic document for environmental enforcement according to the newest development patterns in the Western region (10). If one wishes to outline **the major characteristics of contemporary environmental law or environmental legal process**, some important prerequisites can be identified:

- There is a tendency towards comprehensive general acts on environmental protection, covering the major legal instruments, the outline of the organizational structure, and the spheres of authorities;
- The philosophy for regulation beside the respect of the peoples' right to a decent environment is departing from the ordinary anthropocentric concept towards the rights of future generations or even the necessity to protect biodiversity;
- The environmental protection is the major task of the state, which means the state together with the provincial or local governments has to generate a legal, economic, administrative and cultural surrounding within which environmental requirements can prosper;
- Environmental protection or pollution control as it is called other places must be integrated, with regulations of different environmental elements governed by a general act;
- The main principles of environmental regulation are prevention, cooperation and the polluter pays principle (i.e., the polluter is responsible and liable);
- Environmental and economic management measures must also be integrated - with environmental conditions built into economic strategies and economic incentives built into environmental measures -instead of running parallel and separate from each other;
- The environmental criteria are severe, but with a general environmental policy the phasing in of the different standards and measures can provide a chance for preparation;
- There is a great emphasis on public participation and all necessary preconditions, ranging from access to information to direct rights of participation in different regulatory and decision-making processes.

Most of the countries in CEE are drafting their environmental regulations with this kind of concept in the mind. **There are two major types of environmental legislation in the region: framework legislation**, determining only the fundamental rules and giving room for further legislation; and **detailed legislation**, covering as much of the integrated pollution control measures as possible. Both types have benefits and disadvantages and it is up to a country's legal traditions and the present legislative trend to determine which is preferable (11).

The first version of the **Hungarian** draft, commissioned by the Parliamentary Committee on Environmental Protection, was submitted to the Committee in January 1992. The draft covers most of the general legal measures, from permit systems through economic measures to criminal offenses and among others also has a separate section on privatization. The draft begins with the general and conceptual questions, then addresses the management of state and local government environmental obligations, together with the funds supporting them, and also addresses the criteria for legal regulation from an environmental protection point of view. The public participation provisions require a relatively detailed regulation. Among the means of regulating environmental needs, obligations, fees, permit-systems and incentives are mentioned. The special procedures of environmental protection administration cover among others environmental impact assessment and procedures to be followed in the case of bankruptcy. The detailed liability provisions address criminal liability, compensation of damages, insurance issues and environmental fines.

Meanwhile, in April 1992 the Ministry of Environmental Protection and Regional Policy also completed a draft act, much shorter and less detailed than the previous one. This draft is not a comprehensive piece of legislation, as it refers in a great number of cases to other legislation that would be developed in the future. The draft does not depart greatly from the existing legal provisions. Among others, it gives less guarantees for public participation and fails to address the possible economic incentives.

When speaking about the situation of environmental enforcement in our country and also that of the region, the present status and future possibilities of **drafting and adopting environmental laws is very important**. This legislative process determines in the long run the place of environmental regulations within the legal system, as well as those measures to be used in enforcing the regulations. Therefore in the present situation, the enforcement policy depends strictly upon the state of environmental regulation in general and the state of adopting a comprehensive environmental protection act in particular.

2.2.3 Standard Setting

Situated between legislation and the public administration regulation, standard setting presents a challenge of translating environmental requirements into a numeric form in order to make enforcement programs easier. The efficiency of the standards always strictly rely upon the main purpose of standard setting and the monitoring capacity of enforcement administration. Standards can serve a role in prevention or serve as the basis for liability or sanctions. In the past and today also, the preventive aspect of standard setting has not really been the most important, except in some cases such as in the new air-pollution regulation the new installations must ask for pollution standards before entering into operation.

The standards in air pollution and in theory in water protection are based on ambient (immission) quality standards. From these, the emission standards are formulated. The emission standards are generally territorial ones but may also be established on a factory-specific basis. Setting the standards is usually the responsibility of government ministries. In air quality, the ambient standards are set by the Ministry of Public Welfare and the emission standards are set by the Ministry of Environmental Protection and Regional Policy, with an opportunity for the middle level (county or capitol) local governments to establish more stringent standards. Typically, the size of a country shall effect the division of standard setting duties. The air quality standards in Hungary divide the country into three levels of protection.

In practice the violation of national or regional standards does not result in the limitation or stopping of a polluting activity. Instead the national and regional standards serve as a basis for fines. In the 1970s and 1980s, it was even difficult to make the judicial practice believe that a standard is not a general borderline between lawful and unlawful activity but only a way for administration to measure and prove pollution. On the other hand, if the standards are not really used as preventive measures there impact is not really great.

2.3 The System of Legal Measures - Spheres of Law

When discussing the system of legal measures, the best option is to set up those well-known groups of legal regulations, where the main difference lies in the role of the state in enforcing the rules and the essence - balance of rights and obligations - of the legally characterized relationship. These groups are:

- public administration measures, covering also the economic management,
- civil law or private law,
- and criminal law as the most stringent tool.

2.3.1 Public Administration, Administrative Law

In Hungarian environmental law, as in other legal systems, public administration is the most important in enforcement. Administrative law controls the everyday activity of the state

administration, covering both the central and local governments. A new but increasingly important function of the state is to maintain the balance between environment and society.

The public administration measures in Hungary can either directly or indirectly affect conduct. In a direct fashion, it can force a party to carry out an obligation as regulated by law or decided in an administrative decision. In an indirect fashion, it can influence the independent decision of a party on future activity.

1. **The direct measures can be:**

- **Regulation**, here as a secondary regulation implementing the legislation with the authorization of the Parliament. This can be a general authorization to the government and public administration for adopting a regulation, or a special authorization to explain and enforce the parliamentary level regulatory provisions. Different from this is how to regulate primarily and also in a secondary way issues of territorial and local interest within the **local (self) governments.**
- The basic preventive measure in environmental protection is the **permit or licence**, hopefully combined in the future with the requirements of **environmental impact assessment**. Permitting today is a possible method of prevention, but these regulations include environmental requirements as a secondary element to the main permitting requirements. The environmental administration may only give consent to a more basic operating permit. Here the main problem is **what kind of environmental preconditions** are used in giving a consent to a basic permit. In most of the cases this environmental consent is merely a collateral agreement to the operating permit and its impact on the plant operation is greatly connected with the personal enthusiasm of the public servant in question. Only in a very limited number of cases - like in nature conservation - is there a possibility to introduce first-hand environmental permits. The permits could serve as good sources for compliance instead of further involvement of public administrative authorities.
- Every area of administrative regulation contains **the possibility of positive or negative obligations**. For example, industrial activities causing air, water or noise pollution over a certain period of time may be stopped or limited. In addition, the use of arable land for purposes other than agriculture without a permit is prohibited. If this requirement is violated, restoration to the original situation (in integrum restitutio) may be required. In practice, however, one can hardly find examples where these kind of measures are used.

2. **The indirect measures can be:**

- Administrative sanctions, the most frequently used measure being the **environmental protection fine**. The present act formulates the general rule, stating that all persons who pursue activities contrary to statutory provisions and official orders serving the protection of the environment or fails to meet his obligations prescribed by the same, may be (sometimes must be) obliged to pay a fine for environmental protection according to the extent and dangerousness of such environmental pollution, harm or damage. The fine is considered a measure to protect the general interests of the environment. If a polluter pays a fine, he still may be required to pay compensation for damages or may be subject to criminal penalties etc. These fines are media specific (12).
- A different kind of administrative sanction is the administrative levy against a violator for a **petty offence**. A petty offence is a smaller violation used to penalize the negligent or intentional wrongdoings of private persons.
- The administrative agency may enter into negotiations with the polluter, the consequence of which can be a **public administration contract**, using the agency's discretionary right to use measures other than sanctions. In the present situation, this contract is rather a mere possibility than a frequently used method of negotiating compliance with the potential polluters.
- The present development of a market economy favours the use of **economic instruments or incentives** (13) more than even the near past. The best method of achieving

compliance among the market players should be to use market-friendly measures which orientate the possible polluter in the direction of meeting environmental requirements. The first of this kind of measure was to introduce a product fee on the price of petrol in the spring of this year.

If we examine the situation concerning the practical use of all these measures, one can hardly find a clear-cut list of priorities in using these measures nor is there even a kind of manual to introduce these measures to those practising environmental administration or doing business in environmentally sensitive areas. The practical situation can be summarized like this: there is less emphasis on prevention and more on sanctions, especially on special fines. The use of direct intervention is very rare as are also in the case of measures requiring cooperation between the public administration and the polluter. Today there are almost no incentives or other economic measures used, although in the longer run these measures can have an effect of influencing the decision-making process of the polluting economies. In short if we ask whether an enforcement strategy exists based on the use of all these measures, the answer should be not much.

2.3.2 Civil Law (private law)

To explore existing civil law measures that offer a prospect for environmental enforcement, two basic assumptions must be made: first, there is no need for new special civil law measures, as the present ones are sufficient to satisfy the interests of environmental protection; second, civil law today plays a very limited role in environmental protection. This situation is partly due to the past preference for administrative law, and partly to the weakness of the private sphere and a lack of willingness to litigate.

The following are the major options in the Hungarian Civil Code for safeguarding environmental protection interests:

- personal integrity rights,
- intellectual property rights,
- nuisance (neighbourhood rights),
- trespass (possession rights),
- private contractual relationships,
- compensation of damages.

Personal integrity rights represent a good opportunity for environmental protection interests, because they protect the rights of personal life, health and physical integrity. However, they are rarely used to express the integrity of the private person against the state or the public administration. The consequences of the infringement of these personal integrity rights (as is the case with intellectual property rights, nuisance and trespass) could be numerous, ranging from the simple statement that an activity is unlawful, to imposing conditions upon use, or even to stopping the unlawful activity until compensation is given. The court may even impose an extra levy on the wrongdoer if the other remedies, particularly compensation, do not fully redress the seriousness of the unlawful conduct.

Intellectual property rights can serve as preventive measures in two ways. A direct means is to include environmental requirements in standards for obtaining a license for an invention. The precondition that an invention be progressive can include that the invention reduce (or at least not increase) pollution. A less direct means is to use a label on a product that proves it is environmentally friendly.

Nuisance law (or in Hungarian terms the regulations of neighbourhood rights and obligations) is an easy way to prove the infringement of rights based on an environmental content. Under Art.100 of the Hungarian Civil Code, an owner must avoid those activities which needlessly disturb others (particularly their neighbours), or endanger the exercise of the rights of others. Nuisance is not restricted to the actions of immediate neighbours. There is an uncertainty as to what conduct is needless, as neighbours must tolerate some level of disturbance.

Trespass (or in Hungarian terms, infringement of possession rights under Art.188 of the Civil Code) creates a theoretical right to undisturbed possession of property. Like in nuisance, the disturbance must be examined on a case-by-case basis and balanced against locally acceptable levels of disturbance.

All the above mentioned measures have a common characteristic that makes them especially useful in environmental protection. No negligence or intent is required on the part of the offender for any of these measures, which creates a kind of no-fault liability. In addition, under the last two measures until last year could serve as a basis for indirect judicial review of administrative decisions, which otherwise was greatly restricted (14).

Contractual relationships may also embody environmental protection interests. This embodiment may weaken contractual obligations where there is a conflict of interests. For example in statement No.25 (1980) of the College of Economic Cases of the Supreme Court the court stated that a contractor has the duty to follow environmental regulations even where responsibilities have been delegated to others.

At last we have to mention the **compensation of damages** under Civil Code Art.345. If the compensation of damages is connected with endangering the environment, it shall be subject to the strict liability provision of the Code pursuant to the rules relating to especially dangerous activities. This practice is far from being satisfactory. The cases are limited to more simple, individual cases due primarily to a lack of willingness to litigate. The preventive measure of Art.341 of the Civil Code must also be mentioned. This gives authorization to courts to order preliminary obligatory steps (e.g., to stop or limit the damaging activity) in order to avoid damages.

Even if the present situation of labour law relations is not absolutely clear (due to pending legislation on the labour code), reference should be made within private law issues on the **potential use of labour law regulation**. In many cases, the pollution is the consequence of some negligent employee's activity. Labour law has a possible twofold role in environmental protection.

- First, environmental requirements could be adopted as aspects of professional conduct (here we may also mention professional ethics, which nowadays tends to contain environmental elements, although not in Hungary).
- Second, labour law could include a set of disciplinary rules and sanctions, also special compensation rules for damages caused to the employer, where the damage could be a fine imposed on the company. Both based on the new field of professional conduct but also on the general obligation not to infringe legal regulations.

2.3.3 Criminal Law

Criminal law can hardly be included as an instrument of deterrence in Hungary's environmental law, as there is no real practice of this kind. Criminal law can only be a last resort (ultima ratio) to protect environmental interests, and has no concrete preventive element. An additional difficulty in using criminal law for environmental protection is the fact that in Hungary (as in other legal systems of Europe) criminal responsibility cannot be imposed on legal persons (e.g., corporations). Only natural persons may be liable under criminal regulations, or those who are acting on behalf of the legal entities.

The general environmental protection act includes a criminal provision for environmental violations, and in 1978 the new Criminal Code enacted **two special offenses:** (1) damaging the environment, and (2) damaging nature. The distinction between these two crimes is based on whether nature conservation areas are effected. Both crimes have a version of felony and misdemeanour. In addition, some general crimes like bodily harm or even murder could be used in connection with environmental interests. In the small number of practical cases occurring in Hungary, the offence of endangering life in pursuance of professional regulations proved to be the favorite one. Of course this crime does not really reflect the special environmental interests.

2.4 Organizational structure of environmental protection

When evaluating the present organizational system of environmental protection, the most important questions to ask are whether this organization may easily serve the interests of necessary integrated pollution control, and whether the structure follows the basic requirement separating the economic use of a natural resource and the protection of the same resource. One of the basic problems of the Hungarian environmental protection system was that the separation of interests could not be achieved as even in the broadest level of government, the state administration and the state owned economy existed hand in hand. The other major problem has always been the lack of harmonization and cooperation among different organs having a role in environmental protection, in many cases due to the lack of a clear-cut division of responsibilities.

In 1990 the **Ministry of Environmental Protection and Regional Policy** was established - the third version for the central environmental administration within 3 years. The Ministry carries the greatest responsibility in environmental protection. In addition to environmental protection its responsibilities include regional planning, building-construction, the management of public and historic monuments, and the supervision of meteorology services. The environmental tasks of the ministry include air and water pollution, nature conservation, general landscape protection, noise abatement, waste management, radiation and forest protection. For environmental responsibilities, two centralized administrations have been established under the Ministry: the Chief Inspectorate of Environmental Protection, with 12 regional offices; and the National Office for Nature Conservation with 8 regional offices.

The second most important government institution for environmental protection is the **Ministry of Transport, Telecommunication and Water Management**. This ministry is responsible for water management and use - but not for the protection of water quantity and quality, which is the responsibility of the Ministry of Environmental Protection and Regional Policy. The Ministry of Transport, Telecommunication and Water Management has a National Office of Water Management and 12 regional offices.

Other ministries also have a great number of environmental responsibilities. The **Ministry of Public Welfare** and its Public Health Service is active in the field of pollution effecting public health, the **Ministry of Land Cultivation** with its centralized system of land offices governs soil protection, the **Ministry of Interior** protects settlements, the **Ministry of Industry** is responsible for mineral resources and energy and the **National Atomic Energy Agency** is the exclusive authority for the use and safety of nuclear power.

The conclusions driven from the above short overview: there is a lack of concentrated environmental administration obligations, and in a number of cases the user of the environment and the one responsible for the protection is the same organ. In addition, although the Government is responsible for harmonizing environmental interests, this has not been realized because the economic development pressure suppress them. Because of the lack of cooperation and harmonization, the present draft environmental laws propose to set up consultative bodies for this reason.

On the local and territorial level, the greatest power is in the regional organs of the different ministries. The **local governments have much less power**, although they are not excluded from taking over a greater sphere of tasks, their actual tasks are determined by their narrow financial resources. The officials of the local governments - the mayors and the manager - also have a number of administrative (including environmental) responsibilities given to them by the central administrative organs. This means that in these cases they are not acting like local government officials, but as the representatives of the central administration. The division of powers between the central organs and the local governments still remain a major discussion point.

From among the other public bodies, it is worth to mention the **public prosecutor's offices**, which have general legal supervisory powers over the administration and partly over the economy. They are also responsible for criminal prosecution. Although the possibilities of the prosecutor's offices are great, they in practice have only a minor role in environmental protection, much less than is desirable. The primary reason for this is their lack of experience in the field of environment.

The **judicial system,** with the new improved powers of judicial review over administrative decisions, will soon have a much more direct input in environmental law enforcement. In addition, there is a growing interest among possible parties, mainly citizens, to litigate even using the possibility of civil law. In the courts, political and economic pressures have less input. We may also mention here the special role of the Constitutional Court, having the power to judge the constitutionality of any kind of legal rules.

2.5 Monitoring and Information

We examine the monitoring questions also from the point of view of obtaining and processing information. Monitoring environmental pollution can be the duty of the administrative organ or may be an obligation of the polluter (e.g., self-monitoring, as in the case of air-pollution or hazardous waste regulation together with self-record keeping and recording). Both possibilities require effective state control, as without it no self-monitoring will serve the interests of information on the state of environment. The state-administered monitoring also must be harmonized, as it is the responsibility of a number of organs. Instead of harmonization in today's Hungary, the different agencies prefer to take the processed data as their own exclusive property. This consequently means a lack of effective cooperation among state organs.

The local governments can participate only in theory in monitoring activities, having no real stock of technical facilities (except Budapest). Therefore, they rely strongly upon the centralized systems, and consequently the local governments depend upon the given information.

The information system is a basic condition of effective enforcement from both an environmental administration point of view and from the public participation view. Even with the existence of a reliable information system, the methods of obtaining and disclosing the required information is also a vital part of an effective system. This includes:

- a reliable set of information on the state of environment in general,
- the information systems of different agencies are convertible and accessible,
- there is an obligation of the government to disclose periodically major environmental information,
- there is an obligation of the government to provide information to the other government or local governments,
- there is access to information on the state of environment in general, and also on specific environmental pollution.

In the case of most of these requirements, the situation in Hungary is far from satisfactory. This creates a major handicap for environmental enforcement (15). Some (but certainly not all) of these problems shall be solved with the creation of a GIS system supported by the PHARE project.

2.6 Public Participation

A great potential ally for serious environmental regulatory and enforcement policies could be the public itself and those organizations (NGOs) which have environmental protection as their main purpose. The past political history demonstrates an objection to public participation, under the rationale of socialist harmony of interests, represented by the state. As a follow-up to the prior section, an important condition to public participation is public **access to information**.

Access to information, clear-cut terminology of official and business secrets, and conditions for participation issues are missing in general legal rules. The general rules of administrative procedure do not give guidance in this field. While there is no "community right-to-know" rule within the past administrative regulations, a recent law could create a kind of access to information. This law establishes the Public Health Service and requires the Service to monitor and collect data related to the public health effects of pollution. This information is available to the public, and the Service is required to publicize data on the health effects.

As a second question, we move to the **rule-making procedures** where the former socialist requirement of open discussion of legislative drafts was dismissed as being formal and

only an alibi of the state to avoid the real democratic legislation. According to the Parliament today, living in a rule of law state there is no formal need for open discussion. From the possible public participation awareness only an opportunity to call for a referendum prevailed.

The **Constitutional Court procedure**, somewhat more than 2 years old, gives room for citizens to ask for the constitutional review of legal rules without requiring direct involvement of the citizen in a case. The Court's standing requirements may be the broadest in the world, virtually covering all the cases of post-regulatory supervision and also a great extent of pre-regulatory control. (In effect, the Court is too busy to address all cases in due time.) Citizens may challenge the constitutionality of a regulation serving as the basis for a judicial or administrative decision affecting their constitutional rights. The Court may invalidate the regulation, but not the individual decision.

In **administrative decision-making procedures** such as permitting or direct orders, there is no explicit rule for public participation. Under the general rules of administrative procedure, only "interested parties" can be involved in these procedures. The term of interested party is interpreted in a way to limit involvement to those "whose rights or lawful interests are being affected". The interpretation of this provision today is limited to the narrowest possible sense, covering only direct and material interests.

If we speak about administrative procedure, we should mention the different **control mechanisms** where the public participation could be effective. There are no direct provisions for public participation in this control, and no public disclosure of the control activities. Information obtained in a public monitoring action may serve as a basis for initiating a kind of administrative procedure. However, there is no obligation on behalf of the administrative organs even to answer the proposal in due course. (Interestingly, the last general provision for public control was the existence of national and territorial "public control offices", deleted by the new Parliament as being only measures of a fake democracy.)

The **possible participation of NGOs** also requires a kind of standing in administrative and judicial procedures, which is missing in Hungary. There are presently no legal rights to bring a **class action**. The **EIA process** could be one to cover public participation directly, including NGO rights, but these rules are still in a drafting stage. In **civil litigation,** a serious drawback in addition to the lack of procedural solutions (such as to give standing to the NGOs) is the requirement that costs of litigation must be paid in advance. There is no statutory exception from this general rule based on the priority of environmental interest.

3 CHANCES FOR BETTER ENFORCEMENT

Before any speculations about the future of Hungarian environmental law, if we hope to set up a better enforcement system in the near future, we must have a positive expectation that it will be achieved. Hungary already has mechanisms to create a better enforcement system. The development of such a system mainly relies upon the serious and wilful decision of the Parliament and Government to have real environmental requirements and strictly execute them. In addition to these two most important central regulatory (and in the case of the Government also administrative) organs, we have to add the possible emerging role and responsibility of local (and territorial) governments in formulating regulations and decisions and also in executing legal provisions. The greatest obstacles in the process of developing a new environmental protection structure, however, can be found in the economic and financial resources rather than in the legal system.

The first option for developing a better enforcement system is to review the present general legal and environmental protection regulations, in order to identify those **elements** which can serve the environmental protection interests easily as they stand now. There are already a great number of useful legal measures, and we even may state that the majority of effective enforcement possibilities are already existing. Here we can list such instruments as the permit system, strict liability in compensation, criminal liability. These measures need not be amended in a hurry, as the revision of selected elements of the legal system (instead of the possible restructuring of the whole system) could easily disturb the possible utilization of the otherwise

relatively effective measures. While using the elements of the existing system, we can also learn how to improve them. On the other hand without this kind of practical improvement there is a possibility to develop the new system with similar handicaps of implementation or enforcement.

As to the overview of the existing legal instruments, there are two major ways to bring them closer to the needs of effective environmental enforcement:

- Tailor the existing instruments to the modern concepts of market economy and stricter requirements of protection, together with the overall reconstruction of the legal system (for example as it has happened in the case of environmental protection fines there is no use to make a distinction between natural and legal persons, as today both may be the subject of any kind of economic activity);
- Formulate the administrative and judicial practice in the required direction of environmental enforcement (for example, interpret the constitutional right to a healthy environment in a way that allows it to serve as a general litigation basis, or educate judges and administrative officials on the specialities of environmental protection cases).

These are only two of many aspects of the present unique environmental protection system. These main aspects will assist in the creation of a potentially effective environmental legal system. However, these are only tools in the carpenter's toolbox and if there is no skilled carpenter (or he does not want to work) they are useless. The effective use of these tools will turn on the existence of an environmental policy and strategy, a part of which shall be the enforcement policy. The essential **environmental policy** will:

- identify priorities, both between economy and environmental protection, and also within the several environmental protection targets;
- establish time limits and deadlines for compliance (i.e. compliance schedules) and also outline enforcement strategies;
- locate the purpose and means of use of government financial resources.

A concrete method for **setting priorities** could be to identify those areas where the best result can be realised with the smallest amount of financial resources, among others in order to attract the public. These mean in the greater number of cases simple practical solutions, like the extended use of bottle deposit and return systems. In this way we can activate enforcement even if the environmental financial resources are not sufficient to solve the much bigger pollution problems, as the cleaning up of abandoned waste sites. Together with these practical steps, we must also identify those great hazards where immediate steps should be taken.

The necessary **reconstruction of environmental law** should come only after an environmental policy is adopted, which is not characteristic of the given environmental law drafting. Without this the drafting could proceed as if it was policy-making. In the modern comprehensive act on environmental protection, we must cover at least the following items, in addition to using possibilities of the existing toolbox:

substantive law:

- environmental impact assessment and environmental auditing,
- public participation, NGO rights,
- market elements to be built into the developing market system and also into the environmental law,
- funding issues.

organizational issues:

- harmonization and cooperation among government agencies and between agencies and polluters,
- special task forces in prosecutor's and police offices,
- local government roles and responsibilities,
- ombudsman.

Last but not least, as a general condition we should not forget about **environmental law and enforcement education** in a greater context, raising the environmental consciousness of the regulators, decision-makers and enforcement officials, and also of the public.

NOTES AND REFERENCES

(1) Although the European Community is the one organization most of the CEE countries wish to join, more and more countries of the region also could become members of the Council of Europe. It is worth to mention here the Council's **Recommendation 1131 (1990) on the environmental policy in Europe** (1988-89), adopted on 28 September 1990. In paragraph 7, it states:

"At a time when relations with the countries of Central and Eastern Europe are opening up, we are also discovering the scale of the assaults on the environment in these countries, assaults to which we cannot remain indifferent and which will require particular attention from Europe as a whole."

(2) *Program for Transition and Development of the Hungarian Economy.*

(3) As Hilary French states in *Worldwatch Paper 99 - Green Revolutions: Environmental Reconstruction in Eastern Europe and the Soviet Union* (November 1990): "Though their environment do not show it, both the Soviet Union and the East European countries have stringent environmental regulations on the books....Unfortunately, enforcement of these laws has been poor." (p.34.)

(4) As the *Worldwatch Paper 99* stated at the end of 1990 (being more or less true also today): "Hungary still has a relatively ineffective environment ministry that, until September 1990, was combined with a public-works-style water development agency. It is too soon to tell whether the separation of agencies will enable the environment ministry to pursue its mandate more effectively. Ominously, the administration of construction was combined with the environment ministry. Says environmentalist János Vargha: 'This could be a new fox in the henhouse.' " (p.39.)

(5) The present general act in force concerning the protection of human environment is the Act No.II.of 1976.

(6) The *1992 Environmental Almanac* (compiled by the World Resources Institute) also uses the example of the lake as a positive one in the country: "Lake Balaton, one of the largest fresh-water lakes in Central Europe and an important recreational area in Hungary, has been threatened by sharply increased levels of industrial and municipal pollutants. The excess nutrients threaten to overfertilize the lake and promote the growth of algae. Government efforts to improve water quality, which began in 1983, have helped; after updating 10 sewage treatment plants, the total amount of phosphorus entering the lake has been halved." (p.490)

(7) There are more than 250 different legal regulations which directly or indirectly refer to environmental protection interests, but all were adopted at different times and under different circumstances.

(8) In this paper there are at least three basic regulatory philosophies concerning environmental regulation. The main purpose of regulation differs due to these different philosophies. The most general and common philosophy up till now focuses regulation on the present state of mankind and takes man as the main subject to protect. The second

possibility is to focus on future generations also, this requiring greater efforts from the present generation, because they are not the only guardians of the environment. The third and broadest philosophy is the concept of biodiversity, where not only the human environment must be protected, but also the environment as it is.

(9) Act No.II. of 1976 on the protection of human environment, Art.2.(2).

(10) In the past several years we can present **examples for this kind of legal evolution**: the Environmental Protection Act 1990 (1990 c.43) of Great Britain; Act No.V.of 1991, An Act to protect the Environment of Malta; the Dutch draft of the environmental protection (general provisions) act from September 1989, still under discussion; and the German general Umweltgesetzbuch draft from 1991, still in the process of preparation. The latter two reflect a commitment on the part of the drafters to develop further modern regulation. There are also some trends towards a comprehensive **international covenant on environmental law**, such as the draft of the IUCN - "Covenant on environmental conservation and sustainable use of natural resources" from April 1991. Even in the United States, The Conservation Foundation drafted a comprehensive environmental protection act in 1988, primarily written by Terry Davies.

(11) **Bulgaria** adopted a general environmental protection act in October 1991. The act is a general one and relies greatly on further legal provisions, but covers the most important legal measures such as impact assessment.

The **Czech and Slovak Federal Republic** adopted an act concerning the environment in December 1991. The concept is similar to the Bulgarian act, namely to give only the outline of the regulation. The act tries to encompass the conceptual questions, such as principles or guidelines for future regulation and practice. Based on the federal act, both the Czech and Slovak Republics are drafting their own environmental laws.

The Polish draft was also completed last year, but has not been adopted (the act<s nature protection provisions were adopted in a separate act). A known draft of the act includes 301 articles, and regulates both environmental components and major legal instruments in a rather detailed way.

In **Romania,** the 9th version of their environmental protection draft was completed in December 1991. This draft follows also the method of detailed regulation, leaving less for the later implementation.

(12) Today the following seven fines exist: land protection, water pollution, sewage pollution, air pollution, nature conservation, hazardous waste and noise or vibration.

(13) The economic measures can be divided at least into the following categories:
- fees, fines and environmental payment obligations,
- subsidies,
- benefits and compensations including deposit-fees,
- marketing of environmental obligations,
- fiscal obligations,
- the rules of using public services,
- the rules of self-monitoring on behalf of the companies.

(14) For example, the Supreme Court in its decision Pf.IV.21.023/1984 stated that "any kind of industrial or commercial activity must be carried on without causing any harm to the right of possession. If the opening hours are the source of harm (the case was a noise-pollution case), there is a possibility to order the restaurant closed during the (otherwise permitted) night hours."

(15) A concrete example of the general lack of information could be found in a publication, sponsored by the Ministry of Environmental Protection and Water Management, titled "Studies on the National Environmental Situation" (Tanulmanyok hazank kornyezeti allapotarol) in the Environmental Policy Series, No 1, page 37 stating:

"The precise definition of the present soil pollution situation is a question that has not been solved because of the lack of a monitoring system....To be able to register, tackle and forecast the soil pollution such a monitoring system, information system and evaluating methodology is necessary which is capable to measure separately and collectively the effects of those polluting agents having different origin (industrial, traffic, agricultural, waste-depository and communal) and different chemical compounds and so they are also good for shaping and using the different preventive methods."

DEVELOPING ENFORCEABLE ENVIRONMENTAL REGULATIONS AND PERMITS

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SUMMARY

This paper discusses the need to design environmental regulations and permits to be enforceable, and the factors that regulators need to consider to do so. The paper assumes that the government agency responsible for environmental protection has sufficient legal authority to develop and to enforce regulations and permits. This discussion relies heavily on the experience of the United States Environmental Protection Agency in enforcing its own regulations and permits.

This paper identifies several elements that are essential for enforceable regulations and permits. We discuss why each type of provision is important and give examples of enforcement problems that have arisen when a regulation or permit did not incorporate these elements. We also discuss the steps EPA has taken or is now taking to assure more enforceable regulations and permits in the future.

1 INTRODUCTION

An effective environmental enforcement program must ensure that the goals of environmental protection are actually achieved. To do so, an enforcement program should be strong, efficient, creative, and fair.

First, enforcement programs should be strong enough to have an impact on the regulated community, to change behavior so that environmental compliance becomes standard practice among industry. To accomplish this objective, the program must reach enough violators to pose a credible threat of enforcement against all violators, it must assess sufficient penalties to deter future violations, and it must effectively communicate its results to the regulated community.

Second, enforcement programs must be efficient to establish a presence within the regulated community despite limited resources. Enforcement must use all its available tools -- administrative, civil judicial, and criminal remedies. Where feasible and appropriate, multi-media approaches can address environmental problems comprehensively, potentially delivering greater environmental benefit than would likely be achieved otherwise. Similarly, risk-based targeting enables an enforcement program to devote its resources to addressing emissions or discharges that pose the greatest threat to public health and the environment.

Third, enforcement should be creative, by striving where appropriate for environmental results that go beyond compliance. For example, the government can seek through enforcement to induce a violator to conduct a pollution prevention or pollution reduction project, in addition to coming into compliance.

Finally, enforcement should be fair. If the government treats similar violators in a similar way, industry will have greater confidence in the government and is likely to abide by the consequences of enforcement more readily.

To enable the enforcement program to meet these objectives, environmental regulation must either apply environmental requirements to a specific facility through clearly written permits or ensure that generally applicable rules are clear and enforceable. Imprecise rules and permit terms hamper good faith efforts to comply and reduce a facility's accountability for compliance with environmental requirements.

Environmental agencies can increase compliance by developing regulations and permits that are enforceable. A system which combines enforceable regulations with the promise that the government will respond firmly to violations ultimately encourages a high level of voluntary

compliance. When industry is motivated to control its own operations in order to achieve environmental standards, the need for public expenditure on inspectors and bureaucrats can be reduced. Thus, enforceable standards contribute to efficiency as well as to achievement of environmental goals.

Enforceable standards also focus policy choices. A regulation that contains specific language will gain more serious attention than a regulation written in general terms. Industries and other affected interest groups will be more concerned about new standards when they know that the regulation or permit can and will be enforced.

Enforceable standards are fair to industry by clearly communicating what is required. Clear standards will enable industry to comply, will reduce the chance for arbitrary treatment by government, and will reduce the likelihood of litigation to enforce the requirements.

To write enforceable regulations and permits, an environmental agency should integrate enforceability considerations into its decisionmaking process. Consider, for example, the regulatory agenda of the United States Environmental Protection Agency in implementing the Clean Air Act Amendments of 1990. The Agency is scheduled to develop approximately 100 regulations during the first few years of implementing the new law. In addition, the States will be issuing operating permits to an estimated 34,000 major air pollution sources in the next several years, each of which is subject to review by EPA. The vast scope of this agenda makes it essential that EPA consider enforceability issues throughout the regulatory process and set priorities for effective involvement by enforcement personnel.

A regulatory agency might fail in its basic function if it writes regulations or permits that are unenforceable. As a result, the environmental goals established by the agency might not be achieved.

2 GENERAL PRINCIPLES OF ENFORCEABILITY

There are several criteria for drafting an enforceable regulation or permit. It must:

- Be understandable
- Precisely define the sources subject to its requirements
- Clearly establish a standard of conduct
- Clearly address how compliance is to be measured
- Include clear deadlines for compliance
- Include self-monitoring and reporting requirements
- Be adopted in accordance with correct procedures

Policymakers need to consider the feasibility of compliance in establishing the stringency of requirements. Requirements that are unachievable obviously will result in noncompliance, and the greater environmental benefits desired will not be attained. The most effective strategy for regulators is to consider regulatory options which are achievable. By emphasizing practicability and enforceability throughout the regulation development process, policymakers will increase the likelihood of an effective regulation.

3 ELEMENTS OF ENFORCEABLE REGULATIONS AND PERMITS

3.1 Understandable

The central feature of an enforceable regulation is that it be clear and understandable. Excessively complex regulations can lead to uncertainty among government and industry regarding the requirements of the regulation. Such uncertainty hampers both industry's efforts to comply and the government's efforts to enforce.

Consider the example of the definition of "solid waste" under the Resource Conservation and Recovery Act (RCRA). RCRA is the law that governs the management of hazardous waste in the United States. Hazardous waste is defined to be certain types of solid waste.

The definition of solid waste is so complex that it takes three pages plus a flow chart in the United States Code of Federal Regulations. The United States Environmental Protection Agency (EPA) receives approximately 1000 calls per month on its telephone hotline, most of which involve questions concerning the definition of solid waste. EPA's own study of the RCRA program found that the definition was hard to understand for EPA, States, and industry. EPA further found that permitting and enforcement were hampered by the complexity of the regulations.

The consequences of unclear regulations are illustrated by a recent United States federal court decision that a company cannot be penalized for violating ambiguous, confusing environmental regulations. Rollins Environmental Services (NJ), Inc. v. EPA, 937 F.2d 649 (D.C. Cir. 1991). In this case, a company had been fined $25,000 by EPA for violating regulations governing how to decontaminate polychlorinated biphenyl (PCB) containers. The court set aside the penalty on the grounds of "regulatory confusion." While EPA is currently rewriting this rule to address the concerns, this example clearly demonstrates the need for regulators to write clear, understandable regulations.

3.2 Precisely define the sources subject to its requirements

An enforceable regulation must precisely define the sources subject to its requirements. The critical first step in determining compliance with environmental requirements is deciding who is covered. The regulation must clearly define the regulated industry, regulated activities, and regulated substances. Similarly, a permit must precisely state which facilities and processes are covered.

RCRA regulations illustrate this concern. RCRA regulations require that any person who imports a hazardous waste must comply with certain provisions of RCRA. In particular, the regulations state that the importer must originate a manifest, the key feature of RCRA's "cradle to grave" system of tracking hazardous waste. The regulations do not on their face, however, clearly define "importer." It is less than clear whether the importer is the person who transports the waste across the border, the person who acts as broker, or the person who receives the waste. The absence of a clear definition makes it difficult for EPA to decide who to enforce against for violations of these requirements.

A similar problem is illustrated by regulations under the Asbestos Hazard Emergency Response Act (AHERA). AHERA regulations require that an asbestos management plan be developed for schools. The regulations do not clearly indicate who is responsible for assuring that the plan include the required elements. While EPA has taken the position that both the school and the asbestos management planner are jointly responsible for each element in the plan, the lack of clarity in the regulation creates some uncertainty regarding who EPA can enforce against for violations of these requirements.

As another example, EPA took enforcement action against a company for violating State regulations governing emissions from paper coaters. The company argued in its defense that it was a paper "impregnator," that is, it saturated, rather than coated the surface of paper with chemicals. Even though the rulemaking record showed that the State had intended to regulate this source, a State court agreed with the company's interpretation of the regulation. A federal court then dismissed EPA's enforcement action on the basis of the State court decision. United States v. Riverside Laboratories, 678 F. Supp. 1352 (N.D. Ill. 1988). In this case, the regulation, in the court's view, failed to precisely identify the regulated activity.

DEFINITIONS

- Does the regulation clearly define who is subject to its requirements? A regulation can specify the type of plant, industrial activity, or regulated pollutant.
- Does the regulation apply only to sources of a certain size? If so, does the regulation state how the size of a source is to be determined? For example, a regulation may apply to plants that produce a certain amount of a particular substance per year.
- Are there any exceptions to applicability of the regulation? If so, exceptions should be defined as narrowly as possible.
- Are defined terms used consistently? Once defined, a term should be used only when that meaning is intended.
- Are the definitions and exceptions precise? Definitions should be sufficiently precise for enforcement personnel to identify violations.
- Does regulation clearly identify the legal authority for the regulation?

3.3 Clear Standard of Conduct

A regulation or permit must clearly articulate the standard of conduct expected of a regulated source. If the regulation sets forth an emissions or discharge standard, it should establish a numerical standard which can be measured. Policymakers should consider alternate ways to express a standard of conduct and pick the one which is easiest to measure.

Exceptions or exemptions to a standard should be clearly stated. For example, regulators may decide as a matter of policy that periods of startup, shutdown, or malfunction should be given special treatment. In such case, the regulation should clearly state how such circumstances are to be determined, and what, if any, requirements apply in those circumstances. Moreover, the exemption should be stated in a manner that ensures that a person claiming entitlement to an exemption has the burden of proving that entitlement in the event of a dispute, rather than the regulator having to prove that the exemption does not apply.

Examples of EPA regulations that do not establish clear standards of conduct are abundant. For example, EPA's AHERA regulations require schools to hire asbestos inspectors to identify the locations of all "suspected" asbestos-containing building material (ACBM). The regulations do not define the term "suspected," nor does it contain a list of suspected materials. As a result, in circumstances where an inspector does not actually identify a certain material, it is very difficult for EPA to prove that the material should have been considered "suspected" ACBM.

The environmental agency may not be able to establish emissions or discharge standards in some instances. In such circumstances, the agency may adopt "work practice" standards, that is, regulations which describe activity which a company must conduct to comply. Work practice standards are, by their nature, difficult to enforce and should be avoided whenever possible.

EPA's Clean Air Act asbestos regulations are a classic example of the difficulties posed by work practice standards. EPA's asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) apply to persons that demolish or renovate buildings containing asbestos. The regulations require that such persons "adequately wet" asbestos that is removed. This standard is clearly subjective -performance cannot be measured with any precision. As a practical result, enforcing against companies that wet asbestos "inadequately" is extremely difficult, and EPA usually enforces only against companies that do not wet the asbestos at all.

EPA's permit program under the Clean Water Act shows the value of clear, measurable standards of conduct. Under the National Pollutant Discharge Elimination System (NPDES)

program, a permit holder may discharge pollutants into navigable waters of the United States. NPDES permits contain specific effluent limitations, which restrict the quantities, rates, and concentrations of pollutants in discharged wastewater. Having such specific requirements in permits has greatly simplified enforcement by EPA and by citizen groups and led to high compliance rates in this program.

STANDARDS OF CONDUCT OR PERFORMANCE

- Does the regulation or permit require conduct or performance that is measurable? Methods must exist to be able to measure whether a source is complying with the performance standard set forth in the regulation or permit.
- Are more enforceable requirements available? In particular, regulators should choose, where possible, to set forth an emissions or discharge standard rather than a work practice standard. Emissions or discharges can be quantified and compared against a standard of performance.
- Are exceptions clearly described? Does the regulation or permit address circumstances during which excess emissions are excused, for example, during startup, shutdown, or malfunction? Does the company bear the burden of proving that it is entitled to the exemption?

3.4 Clearly state how compliance is to be determined

In developing a standard of conduct, the agency must consider how it will determine whether the source meets the standard. Environmental goals will not be advanced if the agency develops a standard of performance that cannot be monitored. The regulation or permit should state clearly how compliance is to be determined. Compliance with an emissions standard may be required at certain intervals, 100% of the time, or it can be determined by averaging emissions over a specified time period. Where an averaging period is chosen, the regulation must be clear on the timeframe to be used in averaging. For example, a monthly average can be determined by calendar months, or by "rolling" months, that is, each day an average of the previous 30 days must be used to determine compliance.

In the case of emissions or discharge standards, the regulation or permit should state how compliance is to be demonstrated by the company. Compliance may be demonstrated by various methods, such as an initial performance test, periodic monitoring, or continuous monitoring performed by mechanical monitors. Specifying a test method increases the chance that the company and the government agency will make the same determination of the amount of emissions. The regulation or permit should also make clear whether monitoring data can be used to determine compliance.

EPA's pretreatment program under the Clean Water Act shows the problem that can be presented when a regulation does not specify how compliance is to be determined. Pretreatment is the treatment of industrial wastewater at an industrial facility, before its wastewater is discharged into a local sewer system. The pretreatment program is designed to protect Publicly Owned (wastewater) Treatment Works (POTWs) and the environment from the harm that may occur when toxic, hazardous or concentrated conventional pollutants are discharged into sewer systems. This protection is achieved by regulating the nondomestic users of POTWs, commonly called industrial users (IUs).

The governmental entity responsible for implementing pretreatment controls on IUs is usually the local municipality through its POTW. Enforcement problems have arisen because many of the local and federal requirements were written in general terms, with very few specific terms. As a result, EPA has had difficultly determining whether POTWs were fully and timely implementing their pretreatment programs.

In response to the problem, EPA revised the pretreatment regulations to establish certain minimum actions POTWs would be required to perform in developing and implementing their pretreatment programs. For example, the revised regulations require POTWs to issue local permits to all of their significant industrial users (SIUs). Each permit will specify all of the pretreatment standards and requirements with which a particular SIU must comply. The regulation also specifies the minimum conditions which such permits must contain. By providing more specificity in the regulations through minimum requirements, POTWs would better understand what the minimum federal requirements were for implementing a pretreatment program. These regulatory revisions are expected to improve EPA's ability to monitor a POTW's compliance with its pretreatment program implementation requirements and make EPA enforcement easier where appropriate.

In some instances, environmental misconduct may give rise to multiple violations. In such circumstances, it is sometimes helpful to define the relationship between such violations and a facility's exposure to penalties. EPA's regulations implementing the Montreal Protocol on Substances that Deplete the Ozone Layer include an effective approach to this issue. These regulations impose a limit on the amount of ozone-depleting substances that can be produced or imported annually (in a 12-month period). EPA has legal authority to take enforcement action to seek civil penalties of $25,000 per day per violation. If one considers an annual total that violates the limit to be 365 days of violation, the company would be exposed to penalty liability of over $9,000,000, which might be unreasonable for a minor exceedance. On the other hand, considering an annual total as one violation creates a maximum penalty of $25,000, which may not be enough to deter future violations. EPA resolved this problem by declaring, in the regulation, that each kilogram above the limit would be considered a separate violation. In so doing, EPA devised an approach that directly relates the penalty to the amount of ozone-depleting substances illegally produced or imported.

DETERMINING AND DEMONSTRATING COMPLIANCE

- Does the regulation or permit specify how compliance is to be determined? For example, is compliance determined by measuring emissions at specified intervals? Are emissions averaged over a specified period of time?
- How does the company demonstrate compliance? Is it demonstrated by performance testing, periodic monitoring, or continuous monitoring?
- How does the government determine compliance? Does the government rely on field inspections, review of monitoring records, or review of periodic reports?
- Does the regulation or permit specify a test method for performance tests?
- Does the regulation or permit specify what data may be used as evidence of violations?
- If applicable, does the regulation or permit specify how many violations are created by certain conduct? This is particularly important where the regulation includes an averaging time for determining compliance.

3.5 Clear Deadlines for Compliance

An enforceable environmental regulation or permit should state clearly the time when compliance must be achieved. In some instances, it may be useful to include interim dates by which the company must take intermediate steps to achieve compliance by the deadline. For example, if a permit requires compliance in two years, it could also include deadlines for completing engineering, entering into contracts, beginning installation of control equipment, and

completing installation of controls. Such interim deadlines allow the government to enforce against a company which is behind schedule before the final deadline for compliance.

The NPDES program under the United States Clean Water Act is again a useful model. The permits specify dates for compliance with effluent limitations, including interim requirements, and
contain compliance schedules when the date for compliance is more than one year from the date the permit is issued.

It is important that the compliance deadline be certain and not dependent upon other events. EPA New Source Performance Standards (NSPS) under the Clean Air Act illustrate what can go wrong. Many of these standards require the source to comply with emission limits "on and after the date on which the performance test ... is completed." A performance test measures emissions to determine that pollution controls are working properly. The regulations required such a test to be completed within 180 days of starting operation of a new source. A United States federal court decided that, if a source did not conduct a performance test, there was no requirement to comply with the emission limit. EPA has corrected this problem in recent NSPS by requiring that sources comply with emission limits after the date the performance test is conducted, but no later than 180 days after starting operation. By specifying a certain date, EPA eliminated the possibility that a company could avoid complying with the emission limit by failing to conduct the performance test.

COMPLIANCE DEADLINES

- Does the regulation or permit specify the time by which compliance is required?
- Are interim deadlines included? This is useful where the compliance schedule is longer than one year.
- Is compliance required by a specified date? Compliance deadlines should usually not be entirely dependent on another event under the control of the facility, such as completing the performance test.
- If compliance is required upon the occurrence of an event, does the regulation or permit specify the event clearly so that an inspector can determine whether the event has occurred?

3.6 Self-monitoring, Recordkeeping and Reporting Requirements

To avoid large government expenditures in inspections and monitoring, environmental regulations can shift responsibility to industry for monitoring compliance. Placing the responsibility on industry will increase the rate of voluntary compliance.

To assure that a source maintains compliance with environmental requirements, the regulation or permit must require continuous or periodic monitoring. Merely requiring a compliance test once a year will not assure compliance. Most companies can successfully pass an annual test even if their control equipment is not properly maintained the rest of the year. Thus, a yearly compliance test may reveal little about the compliance status of a source under ordinary operating conditions.

The regulation or permit should be specific regarding what the source monitors. The monitoring should yield data that relates to the performance requirements of the regulation. A source can monitor emissions directly, or, in some instances, a source may monitor other operating parameters which measure the level of pollution control. If, for example, an incinerator is used to control emissions, monitoring incinerator temperature may be useful to ensure that the incinerator is properly operated.

The regulation or permit should state whether monitoring done by the industry can be used as evidence of noncompliance. Some EPA regulations allow emissions monitoring data to be used as evidence of violations. Other regulations do not. If not, the monitoring data can only be used to alert the government that a problem may exist and that emissions testing should be conducted.

Environmental regulations should require sources to keep records of monitoring data and any other information relevant to determining compliance. This may include records of emissions, operating conditions, and operating logs. The regulation should clearly set forth the content of the required records. These records should be made available for inspection by government inspectors.

The regulation or permit should also specify how long the records should be kept. Generally, EPA has required that records be kept for at least five years. United States law limits the period of time for bringing claims for civil penalties in most circumstances to five years from the date of the violation. If a United States environmental regulation imposed a recordkeeping requirement of less than five years, it would allow industry to dispose of records that could otherwise be used as a basis for enforcement.

Since governments generally do not have sufficient resources to rely on inspections of plants or records alone to monitor industry's compliance with environmental requirements, it is essential that regulations and permits require periodic reporting to the government. Reporting can include monitoring data, emissions above the standard, and emergency emissions or discharges. The regulation or permit should be specific about the content of the required reports. It should also be clear about when the reports are required and to whom they must be sent. If authority to enforce has been delegated to a local unit of government, the regulation or permit should be clear about whether reports go to the local unit, the central agency, or both.

Reporting should be frequent enough to allow the government to respond to an environmental problem in a timely way. EPA regulations require releases of toxic pollutants to be reported, in some cases, within 24 hours. More routine reporting is typically required quarterly or twice a year.

RCRA import regulations serve as an example of the problem associated with insufficient reporting. The regulations require the owner or operator of a facility that receives a hazardous waste from a foreign source to submit a notice to EPA once for each wastestream and for each foreign source. There is no requirement to submit notice of individual shipments of hazardous waste. Thus, the regulations significantly limit EPA's opportunity to take any action on individual shipments.

The NPDES permit program, on the other hand, offers a good example of effective monitoring and reporting requirements. The most important is the submission of monthly Discharge Monitoring Reports (DMRs), which summarize discharge monitoring data and identify periods of violations. The DMRs have resulted in easier enforcement for EPA and for citizen groups in the United States. Generally, citizens have been far more successful bringing enforcement actions in such circumstances than where they try to enforce other regulations that do not include such specific monitoring and reporting requirements.

To have integrity, a self-monitoring and reporting program must include significant disincentives for false or misleading reporting and the perception that false reports will be pursued aggressively. In the United States, false reporting is a criminal offense, and a significant portion of EPA's environmental crimes program is directed at this kind of conduct.

MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

- Does the regulation or permit require periodic or continuous monitoring? Does it specify the methods to be used to monitor?
- Is it clear what activity is to be monitored? Does the monitoring data show whether the facility is in compliance?
- Does the regulation or permit specify what information is to be recorded? Does is make clear how long records are to be retained? Are the records available for inspection?
- Does the regulation or permit require periodic reporting to the government? Does it specify what information is to be included in the reports? Is the information enough to determine whether the facility is in compliance?
- Is reporting frequent enough to allow the government to respond to a violation in a timely manner?
- Is failure to monitor, keep records, or submit a report a separate, enforceable violation?
- Are exceptions to monitoring, recordkeeping, or reporting requirements clear?
- Are there serious sanctions in place for false reporting?

3.7 Adopted in Accordance with Correct Procedures

While not often considered an enforceability issue, a regulation or permit may be impossible to enforce if it is not adopted under proper procedures. In the United States, regulations must be adopted after notice to the public and an opportunity for public comment. Failure to adhere to those procedures may result in a regulation being declared invalid by a court, making it unenforceable. EPA's RCRA program is a prime example of the difficulties that can be presented by procedural defects in developing regulations. A federal appeals court recently declared invalid two provisions that are central to the RCRA program, the "mixture" rule and the "derived from" rule. Shell Oil v. EPA, 950 F.2d 741 (D.C. Cir. 1991). These rules defined hazardous waste to include any waste that was mixed with a listed hazardous waste, or is derived from a listed hazardous waste. These provisions were adopted as part of a broad regulation that implements RCRA, after public notice and comment. The court ruled, however, eleven years after EPA adopted the regulation, that EPA had failed to give the public adequate notice of these particular provisions. Accordingly, the court invalidated the rule.

Because of that court decision, another federal appeals court subsequently set aside a criminal conviction for violations of RCRA. U.S. v. Goodner Brothers, No. 91-2466 (8th Cir., June 4, 1992). A company and two individuals had been convicted of knowingly treating, storing, or disposing of a hazardous waste without a permit. Following the Shell decision, the court ruled that the rule was invalid from its adoption in 1980, and that the government could not take enforcement action in this case for illegal handling of waste based on the mixture rule. In response to the Shell decision, EPA reinstated the "mixture" and "derived from" rules, thereby mitigating the impact of the decision on enforcement.

Regulators should be alert to the correct procedures in adopting environmental regulations. A regulation which includes all the necessary elements but is declared invalid based on procedural defects is simply not enforceable.

3.8 Additional Considerations for Enforceable Permits

A permit generally regulates either the construction or operation of a facility that is a source of pollution. Permit requirements are typically based on requirements established in laws, regulations, or guidance. The most common type of permit is a facility-specific permit. In the case of a very large universe of small sources, "general" permits may be more practical. A "general" permit is published like a regulation and gives operating permission to conduct specified activities for anyone who meets certain conditions.

Permits can serve an important enforcement purpose by combining in one document all the environmental requirements that apply to a source. To be most effective in this regard, a facility's opportunity to contest a permit's provisions should be limited to a brief period after it is issued. Accordingly, a permit system can eliminate disputes in enforcement actions over which requirements apply to a particular source.

Many of the elements that make up an enforceable regulation apply to writing permits as well. There are, however, additional points which must be considered in developing a permit system. The law or regulation establishing the requirement to have a permit must specify clearly who must obtain a permit, and when. Most importantly, the regulation should address the consequence of not obtaining a permit. For example, the regulation may specify that the source cannot be operated after a particular date without a permit. In such case, the government could take enforcement action against the source for failure to obtain a permit. Procedures must be specified for obtaining a permit, renewing a permit, and revising a permit. The permit must be clear regarding the length of time for which it is valid, and what requirements apply when an application for permit renewal is pending. It should contain specific requirements such that the source's performance can be measured. If the requirement is an emission limit, the permit should state the time frame for determining compliance.

Enforcement problems can arise if a permit system is poorly designed. In developing regulations to set up a new operating permit system under the United States Clean Air Act, EPA was alert to several issues that could have hampered enforcement. First, EPA included a requirement that each source conduct periodic monitoring of its compliance with permit requirements. EPA regarded this requirement as important to assure that industry maintained compliance with air pollution control requirements.

Second, EPA required that major increases in pollution could be made only if the permit was modified. EPA wanted to assure that the permit continued to reflect the source's pollution levels and activities, so that it could serve as the primary basis for enforcement.

Third, EPA provided flexibility for sources to make certain changes in their operations to meet changing market conditions without obtaining a permit revision. EPA did not, however, allow sources to operate at variance with compliance provisions, such as monitoring, recordkeeping, and reporting requirements.

4 SOLUTIONS

The United States EPA has taken or is taking several steps to ensure enforceability of regulations and permits. First, for several years EPA has provided training to personnel involved in writing regulations and permits. A major element of that training has been enforceability. We use a checklist similar to the one presented in this paper. In this way, we hope to sensitize personnel throughout the Agency, not just in enforcement, to the need for enforceable regulations.

Second, EPA's Office of Enforcement has developed a regulation development course designed specifically for enforcement attorneys, which should ultimately enhance their effectiveness in advocating enforceability in the rulemaking process. Third, EPA's "Enforcement in the 1990's" Project made several recommendations to enhance environmental rulemaking. Most notably, the project workgroup proposed the use of "field testing" of environmental regulations. Under this concept, before a regulation is adopted in final form, it would be subject to a trial period to test industry's ability to understand and comply with the

regulation and EPA inspectors' ability to determine compliance under the regulation. Field testing can be done as part of the initial information gathering process by the regulatory agency, or it can be part of the public comment process on a proposed regulation.

5 CONCLUSION

Regulations and permits will protect the environment only if industry complies with them. Government can do the most to foster compliance by writing regulations and permits that are enforceable. Clear, specific, and practical regulations will promote a high degree of voluntary compliance and will make it easier for governments to respond effectively to violations of environmental requirements.

SWEDISH SYSTEM OF INTEGRATED PERMITTING - WHETHER IT ENHANCES COMPLIANCE AND ENFORCEABILITY

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The Swedish Environment Protection Act is applicable to environmentally hazardous activity. This refers to activities that are operated on a property or a permanent plant or installation.

In the Act the concept environmentally hazardous activity is defined as

- discharge of waste water from land, buildings or installations into a watercourse, lake or other water area;
- use of land, buildings or installations in a manner that may otherwise lead to pollution of land, of a watercourse, lake or other water area, or ground water;
- use of land, buildings or installations in a manner that may lead to disturbance to the surrounding environment owing to air pollution, noise, vibration, light or other such means.

The Act is not applicable if the disturbance is wholly temporary.

Anyone who intends to perform some kind of activity that is included in the concept environmentally hazardous activity must choose such location that can be acceptable considering environment protection.

Anyone performing or intending to perform environmentally hazardous activity shall take such protective action, tolerate such restriction of the activity and take such other precautionary measures as may reasonably be demanded for preventing or remedying detriment.

These fundamental permissibility rules are to be considered by any performer even if there is no permit required. When the activity require a permit, theese rules shall be considered by the permit authority when examining an application.

About 7000 plants or installations in Sweden are subjekt to a permit requirement. The kind of plants and installations that need a permit are to be found in the Annex to The Environment Protection Ordinance.

There are two different levels of permit authorities in Sweden. The Licensing Board considers permit applications concerning the plants and installations that are supposed to be the more hazardous ones. Applications concerning smaller plants and less hazardous activities are to be examined by The County Administrative Board. There are 24 County Administrative Boards in Sweden.

A permit application shall contain

- particulars, drawings and and technical descriptions required for an assessment of the nature and extent of the environmentally hazardous activity
- an environment impact assessment
- proposals for the protective action or other pecautionary measures required to prevent or remedy detrimental effects of the activity and proposals as to how the activity should be inspected
- an account of the consultations that have taken place with central and local authorities, organisations and individuals who may have an interest in the matter

The system of integrated permitting means that all the different kind of operations and activities that occur in a plant or an installation are examnined at one occasion and by only one authority.

When examining a permit application, the permit authority takes into consideration all the diffenrent kind of hazardous activities that may take place within a plant or an installation.

The permit authority is responsible for carrying out a complete investigation of the case in question. The authority makes an assessment of all the disturbances and detrimental effects that

may occur. Operation of an environmentally hazardous activity generally leads to pollution of air, pollution of water, noise and waste.

The permit authority also consider what protective actions or other precautionary measures required.

According to Swedish law, an environmentally hazardous activity is subject to consideration in each specific case. The permit authority shall in a permit decision specify in detail the environmentally hazardous activity to which the permit relates and the conditions apply to.

In the Swedish Environmental Protection Act there are no rules dealing with general limit values. In this respect Swedish environmental law differ from the rules of the EC.

All environmentally hazardous activities are under the supervision of a supervisory authority. Such an authority has several legal instruments that can be used in purpose of exercising supervision. Among the legal possibilities, the authority has got a right of access to a plant or an other installation and to carry out an investigation of the plant or the installation and the area that belongs to it.

Furthermore, anyone performing environmentally hazardous activity is obliged to, on request, submit to the supervisory authority the information required about the installation.

In general a supervisory authority may, because of particular circumstances, issue an injunction concerning such precautionary measures as are necessary for compliance with the Environment Protection Act or with directives issued pursuant to this Act. A supervisory authority may also issue prohibition of an environmentally hazardous activity if the authority consider the operation not permissible.

If a permit has been granted according to this Act and if the permit-holder disregards any condition specified in the permit decision, the supervisory authority may enjoin him to rectify the matter.

Furthermore, a sentence of fines or imprisonment could be imposed on any permit-holder who deliberately or through negligence disregards a condition specified in a permit decison.

One of the advantages of an integrated permitting is that all the operations within an environmentally hazardous activity are dealed with at one occasion. The permit authority has got the possibility of making a comprehensive assessment concerning the hazardous activity and its detrimental effects.

The system of integrated permitting also implies that there is only one authority dealing with supervision over the plant or installation. When the supervisory authority exercises an inspection the authority has got the opportunity to get a general picture of the hazardous activity.

On the other hand the system of integrated permitting does not give you a general picture concerning the whole country or a part of the country. As told before the permit authority makes assessments of environmental hazardous activities in each specific case. That means that the authority doesn't take into consideration the total effect of a number of different hazardous activities.

I believe that the system of integrated permitting implies more advantages than difficulties. The system of integrated permitting in combination with an extended and developed organisation for supervision lead to an opportunity to enhance compliance and enforceability. However, I believe that the Swedish system of permitting and supervision should be completed with rules about limited values in specific respects.

The conclusion is that the way to ensure compliance and enforceability a system of integrated permitting combined with specific limited values is required.

ENVIRONMENTAL PROTECTION AND ENVIRONMENTAL POLICY IN EAST GERMANY - EXAMPLE: SAXONY

D. ANGST

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1 INTRODUCTION

When the State Government assumed office in autumn 1990, the environmental situation in Saxony was marked by a multitude of environmental burdens of every description. Not only the classical environmental burdens, which are to be found in other industrial countries, could be noted which include, for example, massive water contamination. In the Dresden area, the Elb, East Germany's largest river, is almost biologically dead. We should, however, not forget to mention too the extreme air pollution. To date in Saxony alone, emissions of sulphur dioxide were twice as high as in the old Länder counted together. Damage to forests in the Erzgebirge also show, however, the massive atmospheric pollutants from the CSFR. In 1989 alone, imports of sulphur dioxide into the former GDR amounted to 638,000 t. As Saxony borders directly on this region, it is affected most by this.

In addition, there are burdens from sites suspected of contamination, above all too from uranium mining by Wismut AG, at present difficult to estimate, the enormous burdens due to countryside lying fellow as a result of the mining of lignite coal as well as the heritage from the CIS troops.

Capital required to clean up all this environmental damage will amount to several billion Deutschmarks over the next few years.

The GDR leadership was very well aware of this damage and preventive measures were introduced to eliminate the damage but these proved totally inadequate.

In certain parts of the GDR there was already an environmental administration which was working, however, only against a background of economical and health objects, that is to say environmental protection was not practised for its own sake rather only to achieve economic aims or meet hygienic requirements.

For example, for this purpose there were five water resources boards responsible for keeping water clean or in other words taking care that contamination did not exceed a certain level and thus create possible economic damage.

It was the task of the regional institutes of hygiene and government environmental inspectors to see that air pollution was kept at a bearable level so that public health did not suffer too much.

The massive air pollution was countered by a comprehensive legal code and a large environmental administration but this very administration did not act in the execution of these laws for economic reasons. In addition, there was no differentiation between specialized and enforcement administration.

2 ESTABLISHING ENVIRONMENTAL ADMINISTRATION

Against this background, the newly formed Land government started work and thus too the environmental administration of the Free State of Saxony which was to be newly established.

Environmental administration in the old Länder orientates towards other aspects. For historic reasons, environmental administration was established here according to media criteria i.e. the tasks of environmental authorities are modelled on individual environmental media. There are water resources boards for prevention of water pollution, trade supervisory offices for keeping air clean or nature preservation authorities depending on the importance of an environmental medium or the respective pressure to solve problems.

Towards which aspects is the structure of environmental administration in Saxony orientated?

First, it was necessary to establish an efficient ministry as the supreme Land authority whose task it was to cover all environmental media and to have a interdisciplinary character. And as it was the intention from the beginning to introduce the ecological assessment in the Land Planning Act as the basis for Land planning, it was more than obvious also to integrate Land development in the ministry alongside the areas general administration, water, waste and soil, protection against emissions and nature preservation (see Annex 1).

In the environmental administration in Saxony it is necessary to differentiate between specialized and enforcement administration. This is exactly the point which contributed to a large extent to the failure of GDR environmental policy: the lack of proper enforcement of existing laws.

In Saxony a three-tier administrative structure has been selected (see Annex 2). As specialized authority, a Land environmental and geological authority was allocated to the Ministry as supreme Land authority.

The chief task of this Land authority is to cover environmental burdens in Saxony and give information to the public. A monitoring network is being operated for this purpose which covers and assesses all environmental media.

The administrative counties and towns forming their own counties are responsible in Saxony for enforcing the comprehensive environmental legislation at a lower level. If larger projects are involved or district boundaries are crossed, the presidents of the regional administration are responsible as regional authorities. It is, however, too much to expect the county office district authorities and presidents of the regional administration to expertly assess environmental effects.

Therefore, to support enforcement, five specialized environmental state agencies have been established which undertake expert valuations, make recommendations and elaborate proposals for decision-making by the enforcement authorities (see Annex 3). With the formation of these specialized environmental state agencies, it was possible for the first time in the Federal Republic of Germany to achieve concentration which is not confined to one media in one authority. This means the need for agreement and coordination at the level of more than one authority is avoided and accelerates ratification procedure.

Sectoral environmental administration prevailing in the old Länder which is organized according to individual sectors has been dissolved in Saxony and only one integrating specialized authority created. This model has met with approval throughout the Federal Republic and meanwhile attempts have been made in several old Länder to adopt parts of it and also achieve concentration.

3 CONCLUSION

In conclusion, I would just like to briefly consider the main substance of environmental policy in Saxony in order to give you an idea of the complexity of the tasks. Environmental policy in Saxony is guided by a sequence of priority which may be divided into three stages

- avert dangers to directly protect human beings and the environment
- prevent risks already before dangers arise so that risks for human beings and the environment are kept as minimal as possible
- make provision for the future which gives impetus to new technical developments with positive environmental impact and is supposed to demonstrate the new possibilities of growth with positive environmental impact.

The key point by far in mid schemes in the field of environmental protection was therefore water management. Water is the no. 1 provision for human beings and making available drinking water meriting that qualification is not always simple. Of public funds amounting to 556.7 million DM available in 1991, almost 440 million DM were applied to water/sewage. Emphasis here was on projects to redevelop the Elb.

However, waste management measures too, which had to be completely restructured in Saxony after the collapse of the SeRo (secondary resource) system and the appearance of the

flood of packaging after the Wende (reversal), were subsidized with approx. 60 million DM. The "principles of waste management" of the Ministry of the Environment, approved by the Saxon State Government in early summer, direct the way back to the economic cycle and the way out of the cul-de-sac of one-way products.

Measures to keep air clean are to be financed, according to the German federal law on protection against emissions, above all by the operators of large power plants which is why the 28 million DM spent was expended above all for community and social demonstration projects.

With the structure of environmental management we have selected and the key areas set it should be possible by the end of this decade to make up the large deficits in certain areas and reestablish in Saxony an environment worth living in; in other areas, such as sewage clarification, it will probably take 20 to 30 years until the pace of the western Länder is matched.

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Umwelt und Landesentwicklung
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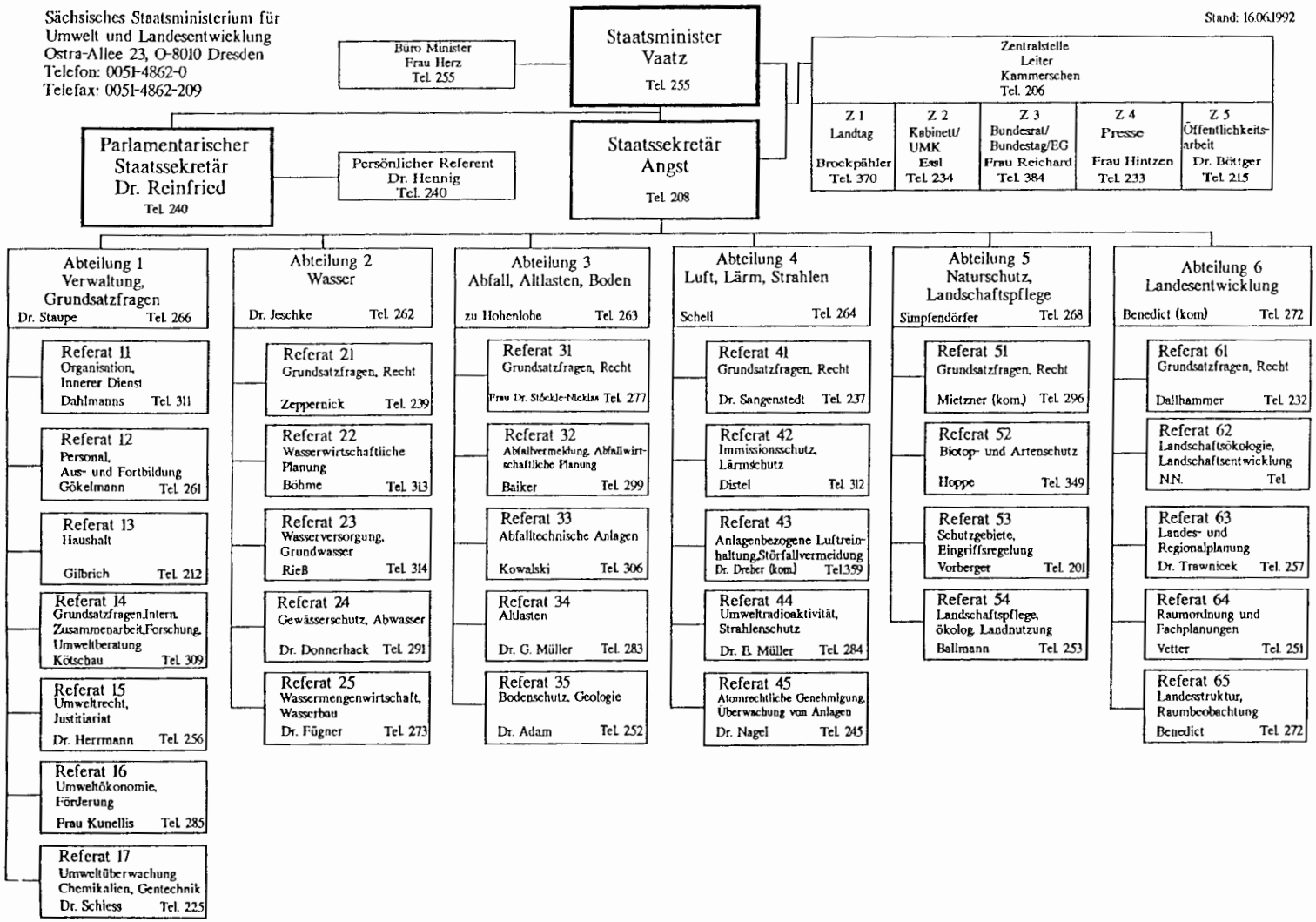
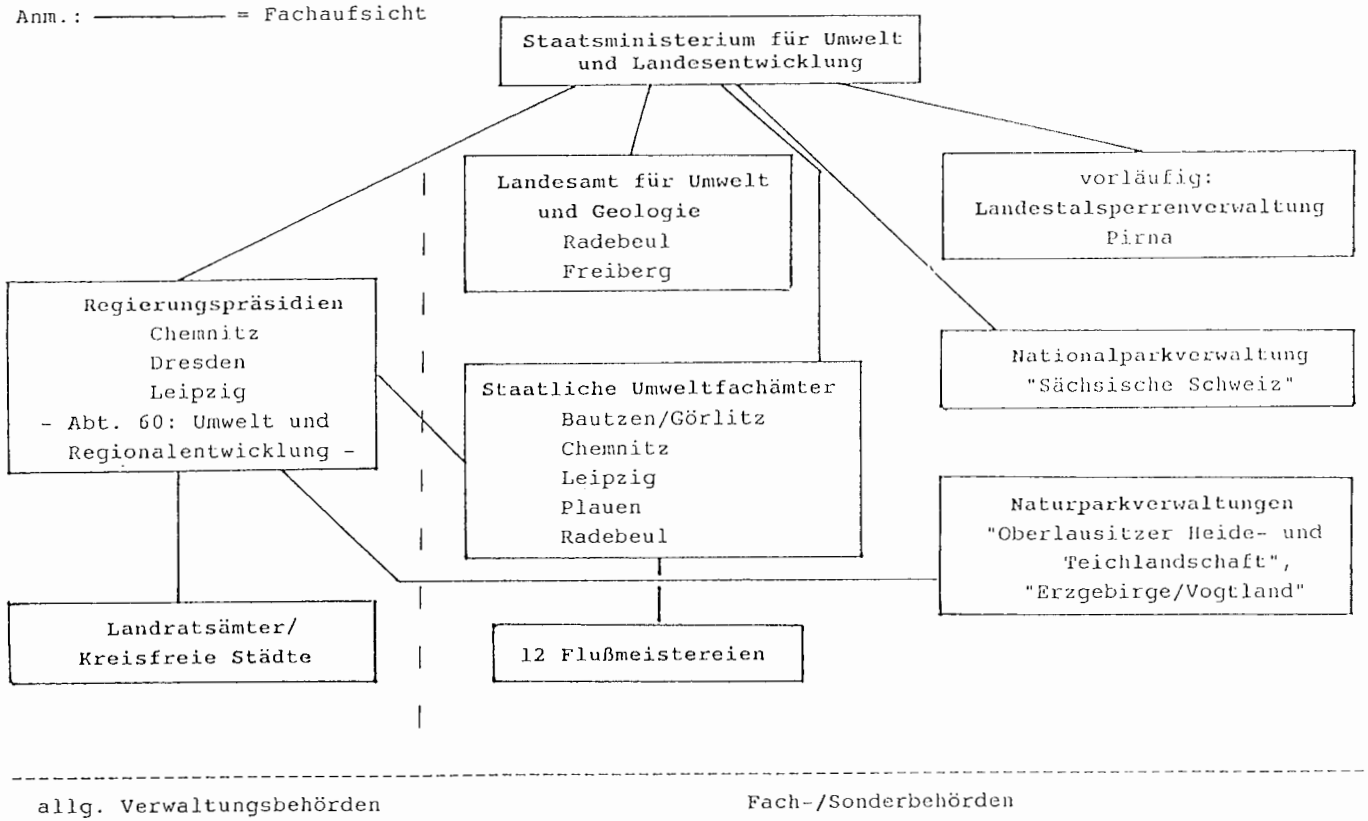
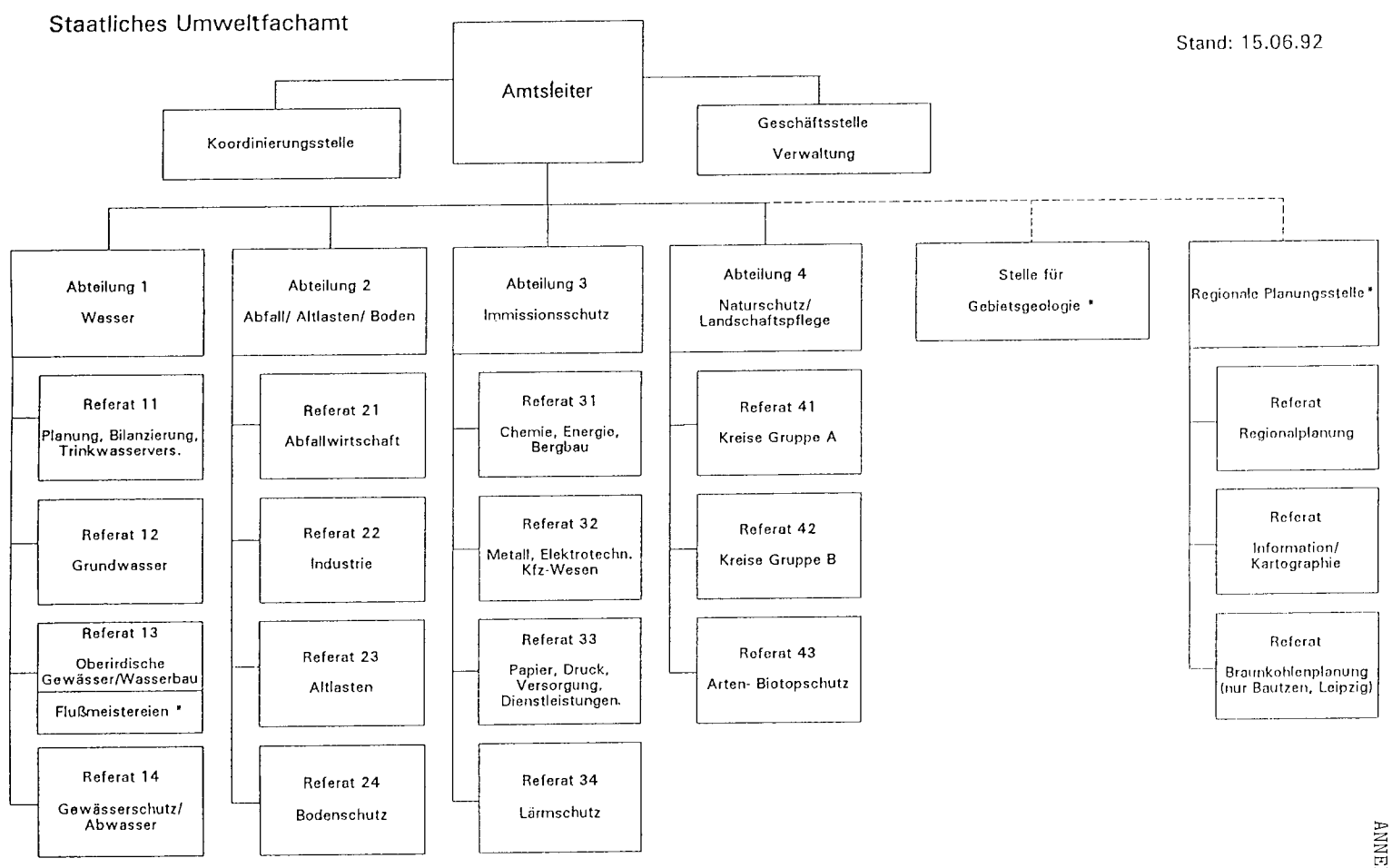
Stand: 16.06.1992



ANNEX 1

Organisationsübersicht: Umweltverwaltung im Freistaat Sachsen (ab Oktober 1991)
Az.: I 1 - 0144.30
Stand: 21.08.91
Anm.: ———— = Fachaufsicht




Staatliches Umweltfachamt
Stand: 15.06.92
Amtsleiter
Koordinierungsstelle
Geschäftsstelle Verwaltung
Abteilung 1 Wasser
Referat 11 Planung, Bilanzierung, Trinkwasservers.
Referat 12 Grundwasser
Referat 13 Oberirdische Gewässer/Wasserbau
Flußmeistereien *
Referat 14 Gewässerschutz/ Abwasser
Abteilung 2 Abfall/ Altlasten/ Boden
Referat 21 Abfallwirtschaft
Referat 22 Industrie
Referat 23 Altlasten
Referat 24 Bodenschutz
Abteilung 3 Immissionsschutz
Referat 31 Chemie, Energie, Bergbau
Referat 32 Metall, Elektrotechn. Kfz-Wesen
Referat 33 Papier, Druck, Versorgung, Dienstleistungen.
Referat 34 Lärmschutz
Abteilung 4 Naturschutz/ Landschaftspflege
Referat 41 Kreise Gruppe A
Referat 42 Kreise Gruppe B
Referat 43 Arten- Biotopschutz
Stelle für Gebietsgeologie *
Regionale Planungsstelle *
Referat Regionalplanung
Referat Information/ Kartographie
Referat Braunkohlenplanung (nur Bautzen, Leipzig)
*) Dem StUFA angegliedert

ANNEX 3

A CLEAR APPROACH GIVES FULL COMPLIANCE

HUGO A.M.A. DE VRIES

Regional Inspector for the Environment in the Province North-Brabant, the Netherlands.

SUMMARY

The Inspectorate gives attention to the enforcement of environmental legislation. In this paper extra attention is given to:

- the complicance monitoring visits to the industries, to inform these industries, and to stimulate the authorities to take action in order to comply with the regulations;
- the development in licensing and enforcement in the Netherlands, especially in the Province North-Brabant.

The intensive contacts of the Inspectorate with the authorities and the industries vary from diplomatic to straight from the shoulder. These different styles are found in this paper.

1 INTRODUCTION

Many reports are published on Environmental Policy in the Netherlands. I refer for example to the National Environmental Policy Plan and Plan Plus (ref. 1, 1989, 1990; references at the end of this paper) and the Annual Reports of the Inspectorate for the Environment (ref. 2, 1990). The environmental policy is developing all over the world (note the United Nations Conference on Environment and Development in Rio de Janeiro, June 1992). Much attention was given to policy planning and legislation, less attention for enforcement. However for "enforcement" we now have this second International Conference.

The everlasting work of P. Winsemius is worth mentioning here (ref. 3, 1986). He has shown two diagrams, which present a clear view of the environmental policy, namely the "Policy Life Cycle" of environmental problems and the "Regulatory Chain". This chain consists of four links: legislation & standard setting, licensing, implementation and enforcement. All the links are indispensible and are influencing one another (ref. 4, 1990, with the two diagrams, ref. 5, 1990).

For about 10 years enforcement had been one of the "missing links", but for the last few years more attention has been given to the enforcement and also to the implementation. With sufficient facilities, an honest and dedicated implementation of the legislation can and must be demanded from the businesses (see for the used nouns ref. 6) and the citizens. Enforcement is monitoring this implementation, is stressing the rules and - if necessary - is amending the rules. Enforcement can cause adjustments to the Acts (ref. 7, 1991).

The Inspectorate (for the Environment) is, together with the Governments, the Public Prosecutors, the Police and the businesses, working intensively on implementing and enforcing (ref. 2,5; ref 8, 1991). Some experiences of the Regional Inspectorate (i.c. for North-Brabant) are mentioned in this paper. The second chapter refers to "Licensing, Implementation and Enforcement in a broad sense", the third refers to "Enforcement in a more narrow sense", the fourth one refers to the incentives for the legislation and standard-setting, caused by enforcement practises and experience.

The Inspectorate of the Ministry for the Environment is an organisation with a Chief Inspectorate and nine Regional Inspectorates. A Regional Inspectorate is mainly involved in the so called "second line" enforcement but also involved in the "first line" enforcement. "Second line" enforcement refers to provincial and municipal government. The main tasks of the Inspectorate are the testing and promoting of the quality of (the execution of) the environmental policy. The Inspectorate makes products i.e. reports on major activity aimed at passing judgement on the quality of the environmental policy and its execution (ref. 2).

2 LICENSING, IMPLEMENTATION AND ENFORCEMENT.

At this moment the Inspectorate is working together with the relevant local governments to attain permits for all the concerning industries by 1994 and provincial governments by 1995. That is to say that all the industries must be granted clear cut understandable permits which can be checked. The present situation is summarised as follows. Industries under control of the Municiple Government i.e. mostly less offending industries are listed under paragraph BUGM and FUN.

Bigger, more polluting, industries which are under the control of the Provincial Government are listed under paragraph BUPM (i.e. Industries which come not only under the Nuisance Act, but also under e.g. the Noise Nuisance Act, the Air Pollution Act, the Solid Waste Management Act).

2.1 BUGM (Contribution Decree Implementation of Municipal Environmental Policy)

By the end of the 70s only 25% of the industries operated on an adequate permit (ref. 9, 1991). For that reason a program was introduced in 1982 to implement the Nuisance Act. There were no funds for personnel at that time. In 1984 a second program was introduced with funds for personnel: the so called MIP, a long-range intensification program for the enforcement of the chemical waste legislation, that supported enforcement activities (ref. 5). In 1990 a third program was started, the so called BUGM program with substantial funds for civil service personnel. The directive is an "adequate" and 100% licensing level, attained 1-1-1994. In the same year the Inspectorate set up a study to look at the quality of the municipal environmental policy (ref. 10, 1991). This study takes place in a yearly basis. The 1990 report on the BUGM program (a product) has led to the following important conclusions:

- the permits must be stricter i.e. the requirements must be stricter;
- the observations were reasonably good;
- the compliance monitoring is insufficient.

The reasons given for the report were:

- insufficient number of experienced civil servants (municipal inspectors);
- municipalities did not liaise adequately with one another (intermunicipal cooperation has begun, but municipal cooperatives not in sight);
- the municipalities show a lack of interest in enforcing the regulations.

2.1.1 Improvements in Licencing

On 1st. january 1990 in North-Brabant (ref. 11) the percentage of adequate permits had (due to the exertion of the Regional Inspectorate) risen to 55% and the intensity of the monitoring compliance had trebled to 13%. The manpower (technical personnel) had doubled. By the end of 1991 the number of adequate licences had risen to 70-75% (in the Netherlands as a whole 50-60%) (ref 12, 1990-1991) (fig. 1). The allocation of annual permits in North-Brabant has grown from about 2800 in 1985 to about 4000 in 1991. At this rate we will have a 90% total by 1995. This is not good enough. A huge effort is still necessary to ensure that we achieve our goal of 100% by 1995. Two further studies of 250 permits of complex industries in 1990 and 1991 by the Regional Inspectorate in North-Brabant (Inspectorate N.Br.) have been completed. The only criticisms to be found were that the stipulations within the permits were not clearly defined especially regarding the measurement of emissions.

2.1.2 Compliance Monitoring

It is the goal of the Inspectorate that the number of industries under control will be 25% by 1995. This means 15.000 controls per year in North-Brabant alone. The figure was 8% in 1985, 15% in 1990 and 21% in 1991 (18% in the whole of the Netherlands). Therefore a goal of 25% in 1995 is in sight (fig. 1).

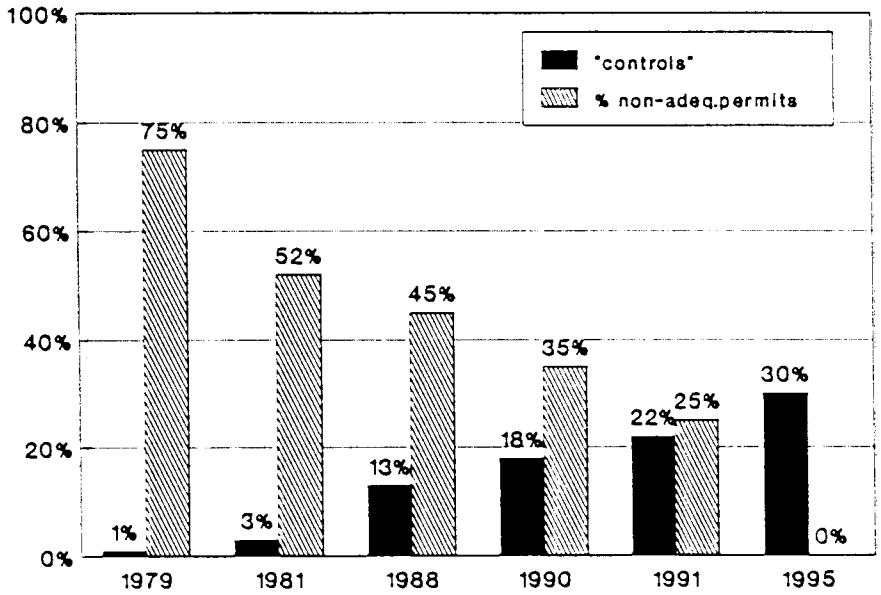


Figure 1. Percentages non-adequate permits and "controls" (compliance monitoring) in North-Brabant.

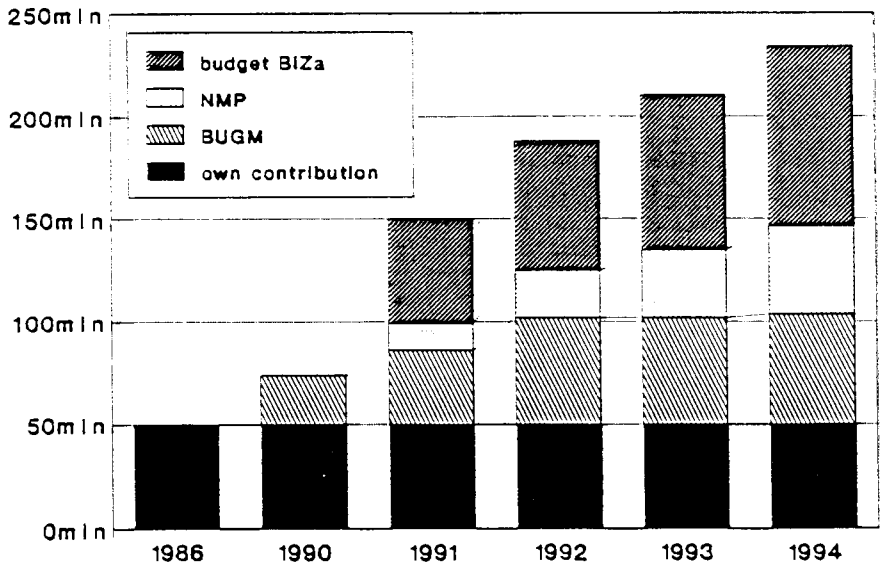


Figure 2. Financing municipal environmental policy in the Netherlands, in mln: million DFL (Dutch florins).
BIZA: Department of Internal Affairs, NMP and BUGM: see text.

During 1990 and 1991 the Inspectorate N.Br. inspected 500 industries together with municipal inspectors. The results were:

- the technical execution was conform the Inspectorate N.Br.;
- the findings, however, should have been briefed more rapidly to the industries;
- from the 250 locations visited in 1991, 23% does not act in compliance with the requirements, 65% shows small shortcomings and 12% meets the requirements.

2.1.3 Organization and Personnel

Owing to the BUGM-program the manpower attributed to licensing and enforcement has been increasing considerably in the Netherlands. In the province of North-Brabant this amounted to 210 in 1990 and to 325 person-years in 1991. The intermunicipal cooperation with respect to environmental activities has also been intensified. Though each municipality remains responsible for the implementation of the national environmental regulation and policy, this cooperation has caused a development towards "Governmental Regions" according to the Common Municipal Regulations Act (Wgr), but they are not governments yet. The officials of each municipality are working together and the public service organization of the mostly central-town is rendering assistance. This organization has the possibility to tackle complex industries and regional items. Experts can be employed, which was not possible for the individual municipality. In time this organization will have to work for the future regional government. In the Netherlands a few of these organizations are operational as yet. In North-Brabant the expectation is that in each of the 7 regions (with about 20 municipalities and about 300.000 inhabitants) such a public service organization will be in effect, since all municipalities agreed upon structural cooperation in their application for BUGM-funding. A different type of advantage of having such efficiently working regional environmental centers, is that the province administration will be delegate part of its tasks to these well organized and well equipped organizations. Indeed, this promotes an integral and regional uniform approach.

2.2 FUN (Financing municipal implementation of the national environmental plan)

The National Environmental Policy Plan contains about 80 points of action that require activities from the municipalities. The subjects differ widely. They might have connection with: industries, soil and groundwater protection, disposal of waste, land-use planning, housing, traffic and transport, energy, communication, education and enforcement. In contrast to the BUGM program, the adequate level of implementation of these points of action is less well defined in the FUN program. Compliance with the BUGM program, however, is a prerequisite for FUN financing. In North-Brabant 90% of all municipalities meet the FUN standards. The amounts involved in BUGM and FUN together, will nation-wide gradually increase to about DFL. 100 million in the year 1994 (fig. 2).

2.3 BUPM (Financing province implementation of the national environmental plan)

For provinces an analogous program to the BUGM ruling has been drafted. The only difference with the municipal directive is that the "adequate" level has to be attained one year later (1-1-1995). The reason is that provinces have to deal specifically with large and complex industries, as well with municipal industries. Nation-wide valid criteria to test the environmental soundness of industry activities, are in preparation. It can be concluded from partial tests by several Regional Inspectorates that much has to be accomplished yet in this respect (ref. 13, 1991).

2.4 Industry

In 1991 a large number of industries were checked in a uniform way by all Regional Inspectorates. The effectivity of the environmental policy and regulation with respect to the

important target group "Industry" has been investigated. This year the findings on the quality of licencing, emissions and waste volumes will be reported.

The first result ("product") on the specific branche of LPG-stations has been published (ref. 14, 1992). Later on this subject will be worked out in detail.

The Inspectorate N.Br. was the initiator of the idea to have industries checked thoroughly with respect to their environmental behavior and side-effects. This has provided insight in the environmental acting of the business community in the province. Only in the last two years, in 1990 about 1000 and in 1991 about 800 industries were visited. With the BUGM checks as a basis, specific categories were added such as, extensive air-emissions, big noise sources, ecotoxic substances (including radio-active ones), intensive farmings and chemical wastes. As a consequence of 65% of the 1990 visits, more than 1000 actions had to be taken, the majority of which in the form of advices to the authorities and the company managers. In the year 1991 50% of the checks gave rise to more than 700 actions. Whenever action was taken in 1991, apart from the relevant authorities the involved industries were always informed about our findings, aswell in 1990 the authorities were informed, but the companies not in all cases.

The specification of the requirements, as laid down in the permit, often turns out to be of low quality, especially when small and medium-sized industries are involved. Primarily the items concerning:

- the registration of the original situation with respect to soil conditions;
- leakproof checking of industrial waste water sewage systems;
- noise level checks; and
- the regulation of air-emissions with the connected monitoring obligations.

The latter are of importance to enforcement and thus need the attention in the near future. In fact, right at the beginning, the very early phase of appliciation for a permit, emission dates and the environmental activities have to be submitted unambigiously. Only in that case the competent authority is able to draw up a licence tailored to the specific situation. In the Dutch legal system the application for a permit constitutes an integral part of the permit itself.

To enable medium-sized and small industries to obtain more insight in their emissions (self-regulation), so called "Corporate company environmental centers" are being set-up, initiated by and connected to the Chambers of Commerce. The first one was established in Tilburg in North-Brabant. Nowadays almost all regions of this province have such oriented advising centers. If the proper insight is present with the industries they will be able to apply correctly for a permit. Furthermore, they will be able to economize their energy and raw material use. This will decrease their costs as well as their emissions. Very convincing examples thereupon can be presented. Large emittors, on the other hand, are stimulated to publicly present a yearly overview of their emissions, based on mass balances. This idea originated in the U.S.A. To further the development of the so called "in-company environmental care systems", the industry has to show the competent authority that the registered data are reliable and verifiable (environmental accountacy?). This is of special interest since the new Environmental Management Act puts prevalence to target-oriented requirements specified in the permit instead of means-oriented ones.

As stated before, these visits taught us a lot about the implementation of environmental regulation by the industries and the enforcement of it by the local authorities (ref. 11). Moreover, insight has been gained on how the developments in reality envolve in the business community, with respect to their environmental care and the attention for clean technologies (ref. 15). However, I prefer to conclude this paragraph with two characteristic activities in North-Brabant.

2.4.1 Liquified Petroleum Gas (LPG)-Stations

During the years 1990 and 1991 nearly all petrol stations (including LPG) in the Netherlands were inspected. At 30% of the stations serious offences were discovered. This figure was decreased to 11% by October 1992. Some 400 out of the total number in the whole country of 2460 are located in North-Brabant (before 1990 there were 560 stations, but 160 stations closed

down during the last two years. This was due to various reasons, including environmental-ones). At the first inspection 45 installations had to be closed down immediately as leakage of LPG was discovered. Of all stations 30 were inspected for the second time in 1991. In 10 of these cases official reports had to be made by the Inspectorate N.Br. and the local police.

2.4.2 Intensive Farming of a Variety of Livestock

In the Netherlands 90.000 pig-, chicken-, turkey- and cattlefarmers exist who have to obey the rules of the Act of Registration on organic fertilizers (manure). In 1992 60.000 rabbit-, duck-, fur-bearing animal-, sheep- and goatfarmers were added to the range of this Act. We also have some ten thousand users of organic fertilizers (e.g. agricultural farmers). For about 70% of the area of the Netherlands this Act is relevant. The responsibility for the enforcement of this Act depends largely upon the farmers themselves. Enforcement of this Act (administrative enforcement not possible) is mainly by criminal law (with satisfactory results). However the legislation is becoming stricter (1995!), so it is now becoming more important for the Inspectorate (ref. 14, in preparation). Therefore, we started an investigation of 250 farms in North-Brabant in 1992, mainly to get an idea about the production of the organic fertilizers and the way they get rid of the manure (checking of the books and collecting information about their license from the Nuisance Act); all participants have been helpful up till now. We expect to report on these investigations next October.

3 ENFORCEMENT

Since 1989 enforcement is not only compliance monitoring and legal action. It usually includes the informational visit preceding a compliance monitoring visit (also inspections in general), negotiations and compliance promotion: a set of actions with all the instruments, used to achieve compliance. As to this enforcement - definition (enforcement in a broad sense) this subject has already been discussed in the former chapter.

In the more narrowly sensed enforcement area the three levels of government (national, provincial, municipal) strengthen their joined cooperation. In the province the national representatives are working together with the provincial and municipal authorities, the water-boards, the Public Prosecutor and the local police. The compliance monitoring will be integrated. The core of the enforcement implementation is provided on the "regional" scale. In North-Brabant there are 7 regions (paragraph 2.1.3). Before ending this paragraph with the present situation, some examples of enforment:

- in 1990 close attention was paid to an industry of the waste branch. Because the permitting authority had forgotten to give a definition of the different types of waste the permit seemed not to be enforcable. Much time and effort was lost;
- a hydrocarbons-emitting industry had a permit from 1985, with the stipulation that the emission had to be cut down in half. Each year the progress in this reduction should be reported on. During 1990 it was obvious that the industry would not be able to reach the goal. Because of the interference of the Inspectorate the industry was forced by the local authority for a periodic penalty payment. This procedure had to be stopped because of juridical reasons. A good report was sent to the Public Prosecutor by the authority. He asked for an official report. The Inspectorate had made a calculation of the economic benefit of this firm omitting cleaning-technology. The Public Prosecutor is now at work on the follow-up of this case. Meanwhile the local authority has made an even stricter permit;
- a second calculation of the economic benefit in another situation did not have any effect because the Prosecutor stopped the case. In this situation as well, a new permit has been granted to the industry. In this permit the air-emission must be cut down step by step. On condition that the requirements are enforceable in the future. The problem is dealt with well;
- to transport some transformers, containing toxic PCB (polychlorinated biphenyls) from one firm to another (that can break up these machineries under good environmental conditions)

a periodic penalty payment, imposed by the Minister for the Environment, came into force. The payment did not become operative, because the transformers were removed;
- in a simular situation at another place in the province legal transport was possible without intervention of the Minister.
  N.B. The transformers were imported as aluminium-scrap!.

These examples make evident that sometimes the administrative, then the criminal law is usable (or both).

3.1 Public Prosecutors and the Police

To encourage the Public Prosecutions Department and the Police to take more interest in the enforcement of the environmental Acts they nowadays received substantial funds from the Department of the Environment. With these funds more personnel, specially trained in environmental affairs, must be appointed.

In the past the cooperation between the police and the Inspectorate was ad hoc. Because of the MIP (see paragraph 2.1) the cooperation became structural. In North-Brabant 3 police-districts have been formed, linked up with the regions. The environmental enforcement of the police is still growing. For technical assistance and insight into the Acts the police cooperates with the Inspectorate. That will continue in the future because of many reasons, e.g. the Inspectorate looks after the environmental regulations, the above mentioned funds, and the Inspectorate can fulfill the function as a court-expert.

3.2. The Structuring of the Enforcement Organization

In addition to the development of the organization focused on licensing and compliance monitoring in the region (see paragraph 2.1.3) a structure should also be given to the enforcement cooperation and an enforcement team will be formed. In the cooperation all licensing and enforcement authorities are participating, i.e. Province, Municipalities, Water-Boards, Departments for the environment, Public Prosecutors and the Police. These cooperations are being formed now and will make the first planning program for enforcement this year. In this program priority will be given to the more complex categories of industries and to projects on waste and manure for example. These projects are suggested by the provincial enforcement committee (PROM). In this committee the same participants are representated, under the chairmanship of the provincial governor. The National Coordinative Enforcement Committee (LCCH), which was founded at the beginning of this year, is a board for cooperation between Departments, involved in environmental affairs, Department of Justice, representatives of the provinces and the municipalities, under the chairmanship of the Chief Inspector for the Environment. The regional program is the working map for the regional enforcement team. This team is made up of civil servants and works intensively together with the local police. It is being run by the regional enforcement coordinator, an employee of the region. An information centre is located near this coordinator. The teams are being built up now and the programs are being formed. It is expected that by the end of 1992 the structure of the enforcement organization in North-Brabant will be as follows.

AUTHORITY	ENFORCEMENT ORGANIZATION	CHARACTER
National Government	LCCH (National Coordination for Enforcement)	national policy and annual programming
Province	PROM (Provincial Coordination for Enforcement)	policy, programming and coordination of the actions
Region	RCCH (Regional Coordination for Enforcement)	regional policy, programming and coordination of the actions
	Executing the enforcement by the enforcement-team	
Municipality	Triangular consultation with the Mayor, the Public Prosecutor and the local police	

4 INCENTIVES FOR THE LEGISLATION, STANDARD-SETTING AND THE POLICY PLANNING

One point of Action (A103) of the National Environmental Policy Plan (NMP) means that there should be a selective study made of the existing and forthcoming legislation standards and requirements, regarding enforcibility. Regarding enforcibility of rules it is of interest to find the combina-tion of exact legal instruments working alongside a practical law. Some examples are: carrying capacity of the target group available and enforcement capacity of the government, promoting mechanisms for self regulation, internal company environmental management, environmental responsibilities of industries. One can say that the experiences of the Inspectorate are given to the main section of the enforcement of the Chief Inspectorate. This body will report on this by the end of 1992 in the 2nd Chamber. You can think of a better liaison between the different laws, better definitions, enforcable rules in the licences, the insufficient administrative and penal take-actions, the insufficient instruments of civil law. There is often insufficient evidence to penalise the industries concerned but there is also a discrepancy in the administrative regulations regarding enforcement of the law. The final consequence should be that the legislation that is not enforcable c.q. executable must be withdrawn (ref. 16).

The recommandations of the above mentioned experiences of the Inspectorate N.Br. are:

- all the industries must be granted clear-cut understandable licenses which can be checked in 1994 and in 1995 for the big plants;
- the municipalities will liaise adequately with one another to form municipal cooperatives. A cooperative has a well-trained and experienced apparatus at its permission;
- parallel with that apparatus an enforcement-team is available in the municipal cooperative. In this team all the enforcement personnel of all the authorities will act together;
- "permitting" and "enforcement" functions should be put in separate divisions. In the municipal cooperatives there are consequently to be two teams;
- there must be one -coordinated- government for environmental licensing and enforcement;
- for the industries and the citizens the rules must be clear in order to be able to get full compliance;
- a systematic enforcement method must be used and annual programs made. Social support is a precondition. For that reason publicity is wanted. The public must be implicated in enforcement, because "with honey you will catch more flees than with vinegar".

In conclusion: Enforcement is the first and the last link because experience and practice with enforcement gives incentives for the legislation & standard-setting, the licensing and the implementation. If the requirements turn out to be unrealistic or impossible to enforce, then compliance will be impossible. A clear approach as an effort to establish popular and business relations for the benifit of the environment gives full compliance for that reason.

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INFORMATION CAMPAIGNS BENEFIT ENFORCEMENT OF ENVIRONMENTAL LAWS

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SUMMARY

The enforcement of environmental legislation in the Netherlands was stepped up in the mid-1980s. Although most enforcement officials had no experience at the outset, a great deal was suddenly expected of them. Central government has attempted to support them by various means, including *information campaigns*.

The Ministry of Environment is basically pursuing a three-track policy:

(1) enforcement officials are informed and encouraged in such a way that they are willing and able to take the task in hand;
(2) administrators are encouraged to accord enforcement priority in policy, and
(3) companies are informed of the law so that they have no excuse for not complying with it.

Tracks (2) and (3) facilitate the work of enforcement officials and expedite the effect of enforcement. In a broad sense, the provision of information therefore contributes to the improvement of the quality of the environment.

Figure 1. The mass media (television, radio and the daily newspapers) are a powerful means of communication. The government holds press conferences or issues press releases on important matters.

1 HISTORICAL FRAMEWORK

During the 1950s and 1960s the population of the Netherlands expanded rapidly. There was a corresponding growth in economic activity and prosperity. The other side of the coin only became obvious after a time, as waste mountains grew and the soil, air and water became polluted. Environmental scandals which directly threatened public health sent shockwaves through society in the 1970s. It was agreed that something had to be done about the situation, and the government accordingly came up with plans, agreements, levies and subsidies.

In the 1980s it tightened up existing environmental laws and regulations and drew up a range of new regulations. It soon became clear that these measures were not enough. Laws were drawn up on paper and published, but no one was sufficiently acquainted with the rules and regulations and there was virtually no monitoring of compliance.

It was in 1985 that the first serious attempts were made at enforcing environmental law, and this year also saw the launch of the first information campaign.

2 ENVIRONMENTAL LAW INFORMATION CAMPAIGNS

The system of environmental law in the Netherlands is fairly complex - ask any lawyer. There are 25 pieces of sectoral legislation and a host of regulations and decrees. The situation is expected to improve somewhat in 1993 when the Environmental Management Act comes into force, encompassing a number of the existing sectoral acts.

2.1 Obligatory openness in government

Nevertheless, the legislation itself and the means of informing the public about it are relatively simple. Only the minister, a handful of civil service lawyers, a number of external advisory bodies and parliament are involved in drawing up legislation. As soon as an act has entered into force, the government is obliged to inform the public about it, under the terms of the Government Information (Public Access) Act. A copy of the act is published in the *Bulletin of Acts, Orders and Decrees*, which contains proclamations, acts of parliament, decrees and announcements of other government measures. It will be clear that the Bulletin is no great work of literature, but it is available to everyone.

2.2 Putting the law into action

Large industrial companies generally have in-house lawyers who keep a close eye on the contents of the Bulletin of Acts, Orders and Decrees and work out the consequences of government measures for the company. However, the average printer or baker has little time for this, and it is for this reason that the government does more than just produce publications containing copies of acts of parliament. The ministry responsible issues press releases and holds press conferences on matters of importance. Of course, this does not guarantee publicity, but the greater the consequences for society, the more interest journalists will show.

Figure 2. The Nuisance Act is based on the Factories Act of 1875 and is the Netherlands' oldest act of parliament. Over the past few years, various categories of companies have been subjected to orders in council, which are published in special booklets.

The government almost always ensures that acts of parliament, which are couched in complicated legal terms, are translated into language which is understandable to everyone. This may take the form of a leaflet which is distributed amongst those affected. *Trade associations* also play an important role in informing the public. These umbrella organisations, which are funded by the individual branches of industry, provide all kinds of services. They follow closely the activities of the government and inform their members of anything they need to know.

2.3 Forgotten target group

Legislation always has *two target groups*. The *primary* target group consists of the public, companies and/or institutions which have to observe the law. Government information campaigns in the Netherlands have traditionally focused on this group. There is, however, also a *secondary* group: the *competent authority* which is responsible for implementing the legislation. This authority issues environmental licences to companies and institutions and is obliged to ensure that the conditions

attaching to these licences are observed.

It will be clear that this secondary target group needs to be equally well informed of environmental laws, a fact of which the government was for a long time not sufficiently aware. While companies were inundated with colour brochures full of information, the authorities charged with enforcing the law were left completely empty-handed. It was only when enforcement was first taken seriously that the provision of information to administrators, licensing authorities and enforcing authorities improved - and it is in fact still improving.

3 MEETING THE NEED FOR INFORMATION

Let us look back to the Netherlands in 1985. Imagine yourself in the shoes of the enforcement officials. Suddenly, central government wakes up and wants environmental legislation to be better enforced. Where do you begin? Which environmental laws should be given priority? What is your area of authority? What are your tasks and responsibilities? How can you ensure that your activities do not overlap those of other authorities? What is expected of you? How should you approach the public and companies? How are you going to tackle shortcomings and contraventions? How are you going to report on progress, carry out evaluations? How do you know if you are making progress? Where are you to find the answers to all these questions? How are you to get hold of the information which you need to do your job well or, at any rate, adequately?

Now let us look at things from the point of view of central government. How is this huge enforcement machinery to be set in motion? And how can it be kept moving? Of course the necessary steps have now been taken. Funds have been released to pay for the required personnel. An organisational structure has been set up in order to enable enforcing authorities to work in collaboration with each other. Courses have been devised to train prospective enforcement officials in the environmental and legal aspects of enforcement and provide them with the necessary skills. Pilot projects have been carried out under the supervision of central government to enable everyone to become accustomed to the work of enforcement.

Figure 3. Enforcement activities can attract the attention of the national, and even international, press. Publicity can be used as a means of prevention, since companies are generally very concerned about their image and are reluctant to throw away their reputation. Press reports of measures taken against companies found contravening environmental laws also tend to prevent other companies from committing the same misdemeanours. However, not all administrative officials and public prosecutors are keen on publicity - out of court settlements, for instance, are almost always agreed behind closed doors, although there have been calls for more publicity.

A great deal of thought has also gone into the provision of information. How can you make sure that relevant information reaches those involved with enforcement? How do you meet the enormous demand for information? More generally, how can the work of the enforcing authorities be supported by information campaigns?

4 POSSIBILITIES AND LIMITATIONS

When enforcement was tightened up in 1985, a lot of thinking had to be done. Matters addressed included, what do you *want* to achieve and what *can* you achieve with information campaigns? Information campaigns are not a cure-all. In general it is assumed that they can have a certain effect on the *knowledge*, *attitude* and *behaviour* of the members of a target group, informing them, motivating them and probably to a certain extent spurring them into action.

In practice things tend to be viewed from the opposite angle, starting with behaviour. Say that the behaviour of the enforcement officials leaves much to be desired. They are achieving too few results, are perhaps carrying out too few surveys within companies and are not devising enough concrete measures. Such a situation must of course be rectified, and this can only be done by looking for the causes, which can be legion. It could be that the problem lies in insufficient manpower - a capacity problem. It could be that there is a lack of facilities for taking samples. It will be clear that in situations like this, little can be achieved by spreading information. The person responsible must ensure that enough staff and facilities are available.

However, the root of the problem could lie in the fact that enforcement officials have insufficient knowledge of environmental laws or that they are unwilling to enforce them. Gaps in knowledge or a negative attitude are problems which can be remedied by an information campaign.

4.1 Objectives of information campaigns

Taking into account the possibilities and limitations, the objectives of information campaigns targeted at enforcing authorities can be summarised as follows:

* *to keep enforcing authorities informed* of everything relevant to the performance of their duties (information campaigns can increase their knowledge);
* *to increase their willingness* to carry out their enforcement duties (information campaigns can be used to promote a positive attitude).

Figure 4. Since 1991 the Netherlands has also had a *Zakboek Handhaving Milieuwetgeving* ('Environmental Law Enforcement Manual'), which the environment minister Hans Alders is presenting here to an enforcement official. The Manual contains basic information on environmental laws, methods of enforcement and security measures and contains a glossary, a summary of all organisations involved in enforcement and their addresses, and a number of annexes.

4.2 Target group

Besides formulating objectives, it is important to any information campaign that the target group be analyzed. Who is actually responsible for enforcement? This type of analysis is no easy task in the Netherlands. One complicating factor lies in the fact that responsibility for the implementation of environmental policy does not rest with one individual or body. For example, the environment minister does not bear sole responsibility at government level. Although he is responsible for overall environmental policy, the Minister of Transport, Public Works

and Water Management is responsible for the Pollution of Surface Waters Act, and the Pesticides Act and Nature Conservancy Act fall within the remit of the Minister of Agriculture, Fisheries and Nature Management.

There are also several levels of government in the Netherlands: the provinces (12), the municipalities (650) and the water authorities (40). And this is only the administrative side, for enforcement also involves the judiciary, including the public prosecutions department, the police, fire service, customs authorities, Royal Military Constabulary, railway police and numerous other special investigation agencies. Some 30,000 people are involved in enforcement in the Netherlands, and that figure does not include those involved in civil proceedings.

4.3 Strategy and methods

After analyzing the target group and formulating his objectives, the information officer will examine how he can achieve those objectives. This process results in a strategy, accompanied by proposed methods.

In the case of enforcement it soon became apparent that simply informing and motivating informers would not be enough. In order to perform their duties, these people are largely dependent on other people: their superiors, the authority for which they work, policymakers in general, the legislature which draws up environmental laws and regulations, courts which try environmental cases, the companies they monitor, and even the general public and the value it places on enforcement of these laws.

The strategy devised to expedite the enforcement of environmental legislation therefore covers several tracks. Besides informing and motivating enforcement officials (track 1), priority has been given to:

* motivating administrators (track 2), and
* informing companies (track 3).

One matter which has not been discussed here but which is nevertheless very important is communications with the legislature and judiciary.

4.3.1 Administrators

Studies have shown that the attitude of the administration strongly affects the success of enforcement. An administrator with a negative attitude will be unwilling to equip the enforcement department of his organisation with the power it requires. He is also unlikely to impose many administrative sanctions (recognizance, closure). In short, an enforcement official may work as hard as he likes, but without the support of the administration, he will achieve little.

Information campaigns can be used to improve commitment on the part of administrators. The environment minister (through the Environmental Protection Inspectorate) regularly reminds administrators of their responsibility for the environment and sets an example with his own enthusiasm for the subject. Information officers use publicity and special campaigns to carefully steer public opinion. The role of the public must not be underestimated; in a democracy the public forms the basis of society. If it feels that something is important, administrators and policymakers also consider it important - after all, they work in the interest of the public.

4.3.2 Companies

When an enforcement official goes to visit a company, the staff should ideally be aware of all laws, regulations and standards with which the company must comply. This makes the job of the enforcement official much easier. In the past, enforcement officials have arriving at a company and finding an environmentally unsound situation, tended to be unwilling or unable to do anything about it, since such a company would offer the defence that it was unaware of breaking the law. The enforcement officials would then do everything they could to provide the company with the necessary information. When they came for a second time, they would be pleased with the slightest progress.

Luckily, this situation has changed, partly due to the fact that central government, in collaboration with a number of trade associations, has provided industry with more information. A pilot

project carried out in the framework of the Chemical Waste and Waste Oil (Regulations) Act showed that the three-track strategy works. Each individual branch of industry was provided with information on the Act, in a series of colourful booklets. Those responsible for the enforcement of the Act benefitted greatly from this project, taking the booklets along with them when they went to visit companies, should they be needed. There would be no mercy for those who had not complied with the law by the second visit!

Booklet	Circulation
Environmentally safe handling of general chemical waste/National list of licence-holders	155.000
Environmentally safe handling of chemical waste:	
- Electrotype companies	8.000
- Painters	10.000
- Dentists	10.000
- Printers	15.000
- Photochemical waste	17.000
- Garages	32.000
- Car sprayers	20.000
- Anti-rust treatments	14.000
- Inland shipping	15.000
- Chemical waste: obligatory notification	40.000
- Dry cleaners	5.000

Figure 5 and 6. The multi-year intensification programme (1985-1991) focused on the enforcement of the Chemical Waste and Waste Oil (Regulations) Act. To assist enforcement officials the government has published a series of booklets which set out how each sector can bring its production process in line with the Act. The effect of the booklets was tested, and no reason was found for altering the strategy.

4.3.3 Enforcement officials

What about the enforcement officials themselves? What has the government done for them by way of information?

Firstly, there is the magazine *HANDHAVING* ('Enforcement'), which comes out once every two months and of which we are justly proud. This magazine, which is 100% government-funded and therefore free of charge, has been going for eight years and now has more than 12,500 subscribers. In view of the fact that readers pass the magazine on to their colleagues, the total readership is

somewhere in the region of 30,000.

HANDHAVING aims to inform enforcement officials in the field and to motivate them by providing background information on environmental policy, specific information on laws, regulations and standards, suggestions for dealing with situations which are bad for the environment, information on the operation of administrative, criminal law and civil law enforcement instruments, examples of collaboration between enforcement authorities, relevant training courses and publications, readers' letters and questions (complete with answers), and a host of practical examples.

For central government, the great benefit of the magazine is that it approaches all enforcement officials, working in a large number of organisations, as one group. A survey of the readership has shown that officials value the magazine highly. They regard the information it contains as useful and reliable, and the presentation (writing and design) meets with resounding approval. This is due to the fact that, while the government funds the magazine, it has never tried to stamp its mark on it. From the outset, HANDHAVING has been a magazine *for* enforcement officials *by* enforcement officials. The editorial board and permanent staff - a number of prominent environmental journalists - are supported by a rotating advisory committee of ten enforcement officials from the field. This guarantees feedback from the grassroots.

The magazine is not entirely free of flaws. It spends a long time in production (writing, design, printing), since articles are drawn up with the greatest care. In deviation from standard journalistic practice, they are always checked and corrected by those involved. However, the magazine can never be entirely up-to-date. It is also disappointing that it is read by very few administrators. Perhaps it is targeted too directly at the grassroots. The fact is that the magazine does not offer an effective method of drawing administrators' attention to environmental laws.

sector	no. of readers	average reading time (minutes)	no. of times consulted	report number
police	2,298	82	4.4	7.6
municipalities	3,338	80	2.5	7.5
administration & judiciary	1,219	80	3.3	7.4
provinces and public works department	,994	71	3.6	7.3
customs & fire service	1,314	67	3.6	7.2
total/weighted average	9,163	77	3.4	7.4

Figure 7 and 8. Some figures from a readership survey of the two-monthly magazine *HANDHAVING* (April 1991). The figures in the last three columns are based on responses from a representative sample; 235 readers were selected for in-depth interview. The most important sectors were included in the survey. There was a further sector comprising readers from other organisations.

HANDHAVING is not the only publication which is aimed at enforcement officials. Central government produces a number of other publications containing information which is important to those who enforce envi-

ronmental laws. *The Handhaving Milieuwetten* ('Environmental Law Enforcement') series contains more than fifty information packs with the results of surveys, evaluations and reports. All kinds of theoretical and practical information can be found in the *Zakboek Handhaving Milieuwetgeving* ('Environmental Law Enforcement Manual'). Enforcement officials can consult this book when they want to know something about a particular environmental law, and there is also a chapter containing the addresses of all organisations involved in enforcement. The Manual was drawn up under the auspices of the environment ministry, which also funded it. However, it is published by a commercial publisher, who also determines its price, and is responsible for any profit or loss. This type of public-private partnership is becoming increasingly common.

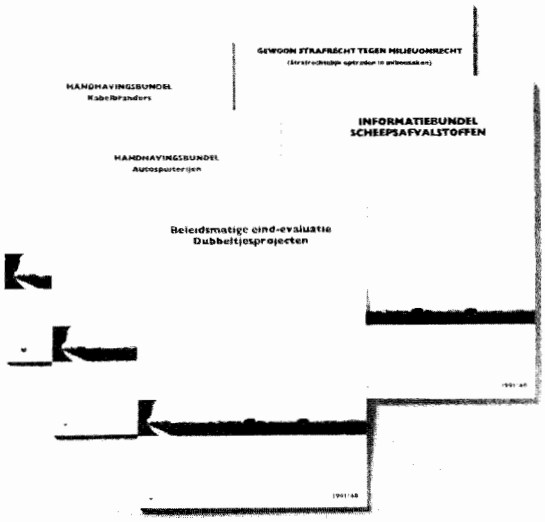

Figure 9. Various volumes containing information for those who enforce environmental laws have appeared in the *Handhaving Milieuwetten* series. These relate to different types of institution - a useful guide for on-site visits - and there are also guides to the enforcement of different laws and regulations. The results of enforcement campaigns and studies (such as those on the delay in the administrative enforcement of environmental laws, interaction between different authorities, and collaboration between the administrative authorities and the public prosecutions department) are also published.

Enforcement officials are not only inundated with written material. Meetings are also held where ideas and information can be *exchanged. Conferences* were recently held in the regions (between a number of municipalities, water authorities, the province, police, public prosecutions department and Environmental Protection Inspectorate). By getting everyone together, it was hoped that regional collaboration could be improved. The conferences were subsidised by the government, but it was up to the regions to decide on form and content. Some of the conferences were designed as a way for people to get to know each other, while at others specific procedural agreements were reached and annual programmes of enforcement activities in the region were drawn up. *Information meetings* are also held occasionally on specific themes. A round of such meetings will be held when the Environmental Management Act is introduced in 1993.

5 IDEAL BEHAVIOUR

For information officers, an adequate (ideal) situation will have been reached if all the following objectives have been achieved:

* The legislature should attempt to integrate sectoral environmental laws and take into account the practicability and enforceability of new laws. It should also communicate regularly with the enforcing authorities.
* The judiciary should handle environmental cases as fully-fledged criminal cases. Attention should be drawn to the environment by means of information campaigns. The more the seriousness of environmental crimes is realised, the stricter the penalties will be.
* The administration should hold the environment in general and the enforcement of environmental laws in particular in very high regard. Motivated administrators will be more

likely to ensure that enforcement programmes are implemented and that sufficient enforcement capacity is provided and be more prepared to cover the costs of enforcement. Information campaigns can help to motivate administrators who, once convinced of the importance of the environment, will not hesitate to penalise companies and institutions for their shortcomings in this area. The policy of condonement, whereby a blind eye is turned to environmentally damaging situations, will then be a thing of the past.

* Companies should be aware of the environmental laws with which they must comply, and will no longer be able to plead ignorance. They should be aware of the consequences of noncompliance and have a healthy respect for the enforcing authorities. The trade associations must recognise the need for compliance and communicate directly with the government. Those ahead of the field should exert pressure on those who lag behind.
* The public should provide support and thereby influence political priorities. Environmental information campaigns will increase their environmental awareness, and environmental problems should be at the top of their list of priorities. They should value the work of those who enforce environmental laws.

What of the enforcement officials themselves? In an ideal situation such as that described above their work would be plain sailing for them, and they would be welcomed and respected wherever they went. Their efforts would quickly bear fruit and they would be able to go home satisfied at the end of the day. One of the essential preconditions for such a situation is the effective use of information campaigns.

EEN BETER MILIEU BEGINT BIJ JEZELF

Figure 10. In September 1990 a huge information campaign was launched in the Netherlands with the motto "A better environment begins with you". The public's attention was drawn to environmental problems using television and newspaper advertisements and posters. Emphasis was placed on the fact that everyone can do their bit for the environment. The campaign seems to have worked; environmental consciousness and willingness to act are on the increase in the Netherlands.

6 CONCLUSION

When in 1985 the Dutch government stepped up its enforcement activities, very little information was available to enforcement officials. This situation soon changed, when the need to inform and motivate them became apparent.

The information campaigns will continue, and even be *intensified*, until the 'ideal' situation has been achieved. The government has decided that an adequate level of enforcement must be reached by 1 January 1995. If this has been achieved by this date, the thrust of information campaigns can be shifted to ensuring that the situation is *maintained*, and activities can be reduced somewhat.

ALTERNATIVE ORGANIZATIONAL STRUCTURES FOR A COMPLIANCE AND ENFORCEMENT PROGRAM

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SUMMARY

This paper is about issues associated with the problem of organizing government institutions to carry out effective enforcement and compliance programs. Compliance is essentially that condition when all legal requirements are met by a particular member of the regulated community. Enforcement is the set of actions taken, primarily by government, to achieve compliance. This paper is about organizing for enforcement. It is not about how to do enforcement, or when to do enforcement, or the legal tools necessary to do enforcement. Also, since government structures are widely variable from one country to another, the ideas in this paper are not meant to be absolutes. Rather, they are meant to suggest broad answers to several organizational questions as the problem of organizing for enforcement is considered within the context of particular governance systems.

Finally, it must be remembered that enforcement is a strategic process designed to advance the environmental objectives of society. It must be planned, resources allocated, preliminary actions taken, and follow up sustained --- often over long periods of time. Proper organization for this endeavour is crucial to its long term success.

This paper provides a summary discussion of the primary objectives of an enforcement program and the qualities necessary to assure that the program achieves those objectives. The paper then identifies and briefly discusses the basic functions of an enforcement program and sets forth several different approaches for organizing to accomplish those functions. The paper discusses the success with which these approaches maximize achievement of the qualities and objectives of an enforcement program and also discusses several external factors which can influence these outcomes.

The observations and conclusions in this paper are largely based on the author's own experiences. These include nearly twenty years of state and federal government work in enforcement related activities, including the creation of several new environmental enforcement organizations. Recently, this experience has included consulting with several foreign governments and international organizations on enforcement matters.

1 OBJECTIVES AND QUALITIES OF AN ENFORCEMENT AND COMPLIANCE PROGRAM

1.1 Objectives for Enforcement

There is great diversity in the subject matter of environmental regulatory programs and the strategies they embody to assure compliance with substantive requirements. Thus, the subject matter can range across land, water, air, public health, and natural resource protection. Similarly, techniques for protection can include a range of activities extending from economic incentives or disincentives, to permit conditions, to denial of the privilege to do business through revocation of permits.

Whatever the subject matter or the enforcement strategy, a reality of environmental governance is that there must be a base-line system for compliance and enforcement. This base-line is established through the enactment of statutes which set norms of behavior and also establish mechanisms designed to assure compliance with those norms. The mechanisms by which the norms (standards) of environmental behavior are established can be complex and subject to a confounding mixture of scientific opinion and public policy objectives. In contrast, the

purposes of the compliance and enforcement components of environmental protection programs are comparatively easy to define. There are essentially four objectives for a compliance and enforcement program:

1. Deter and persuade --- One of the most important purposes of an effective enforcement and compliance program is to affect the behavior of the regulated community through the imposition of sanctions. There are multiple dimensions to this objective. First, government seeks to assure that the object of the enforcement action does not violate the law in the future. Second, government seeks to assure that others either voluntarily correct violations before they are discovered by government or achieve a high level of compliance, i.e., do not violate the law. This deterrent function is vitally important simply because government will never have enough resources to actually take enforcement actions against a very high proportion of violators at any given moment in time; thus, voluntary compliance is crucial to successful protection of the environment.

2. Correct non-compliant conditions --- Importantly, legal processes can be employed to seek administrative or judicial orders directing the cessation of environmental law violations and/or the correction of related adverse impacts. In the United States legal system, the use of equitable relief mechanisms is an effective device to assure specific performance to protect the environment. In addition, these mechanisms can, at least, assure that the actions of private parties which have a potential to damage the environment are restrained unless in conformance with applicable law.

3. Punish violators --- While closely related to the deterrent function, punishment for violations of the law has its own independent purpose. Simply stated, those who violate the law incur an obligation to society. A violation of environmental law is usually not some abstract event but involves a direct or indirect reality or threat of harm to the environment or public health. Punishment can have a variety of forms ranging from specific corrective actions, to monetary penalties, to actually serving a prison sentence.[1] In general an enforcement and compliance program will reserve this objective for more serious violations.

4. Create a norm of expected behavior --- An important function of enforcement is that the collected body of enforcement actions, taken over a period of time, define the level of behavior which is expected of the regulated community and the consequences when that level is not met. In fact, this norm of expected behavior is an elaborated statement of the more general requirements that may be set forth in duly enacted laws. This system of interpretation is not meant to be a mechanism for weakening statutory or regulatory requirements, but rather for filling in the blank spaces which these abstract words often leave. In addition, to the extent that the enforcement process actually produces written interpretations of law and regulations, such as in a judicial decision, these have important precedential value and therefore serve as important guides for behavior.

A well designed compliance and enforcement program can achieve each of the foregoing objectives. This is particularly important since they normally reinforce and complement each other. However, the evolution of strategy over time will undoubtedly suggest reasons to emphasize one set of objectives over another given the particular status of the overall environmental protection program. In summary, the bottom line expectation is that compliance and enforcement activities are carried out in order to maximize the rate of voluntary compliance by utilizing resources of an agency with maximum effectiveness.

1.2 Qualities Associated with a Successful Enforcement and Compliance Program

There are several qualities which ought to be maximized through organizational (and other) decisions in order to help achieve the suggested objectives of an enforcement program.

Each of these is quite subjective and the specific steps which might be taken to achieve a particular quality might be quite different in one governance system as compared with another. However, they do provide one useful check-list against which organizational decisions ought to be measured.

1. Strategic --- Because enforcement actions cannot be brought against every violator, there must be a strategic design to the enforcement program. For example, program managers must assess: which kinds of enforcement actions will maximize deterrence; what are the most important threats to the environment which need correction; and which legal remedies will be most effective. The strategic use of scarce resources is essential to achieving the objectives of enforcement, especially that of deterrence and persuasion.

2. Efficient --- The use of always scarce government resources must be efficient. Wasted inspections, or laboratory tests, or endless conversations without results simply mean that fewer effective enforcement actions are taken. Inefficient use of resources will tend to lower the volume of successful enforcement actions and therefore lower the rate of voluntary compliance.

3. Swift --- Enforcement actions should be swift. In essence, the time between discovering a violation and final imposition of the appropriate enforcement sanction must be made as short as possible through the rapid and effective deployment of the various enforcement elements. Long delays diffuse the deterrent impact of enforcement both in the mind of the violator as well as in the minds of those who are similarly situated.

4. Visible --- The hidden or invisible conduct of enforcement serves to defeat several of its most important objectives, namely, deterrence and the creation of a norm of behavior. In addition, wide visibility for enforcement actions is one of the most important ways in which the public develops confidence that government agencies are responsibly and effectively carrying out environmental protection duties. A vigorous enforcement program focused on major violators, communicated through the media, and endorsed by important political figures, strongly contributes to visibility.

5. Fair --- The overall perception of an enforcement program must be that it is fair. Fairness not only means that individual matters are handled within the norms of legal propriety, but, even more importantly, that over time similar violations are handled in essentially the same fashion. For example, penalties for comparable violations ought to be equivalent. Fairness also means that there must be enough resources within the environmental agency so that a reasonable number of actions can be taken within a given period of time. This perception of fairness must be held by the regulated community in order to maximize the deterrent and persuasive effect of an enforcement action; otherwise, the perception of arbitrary enforcement does little to help mold norms of behavior.

   Additionally, if an enforcement program which is strong is, at the same time, thought to be arbitrary and capricious by the regulated community or the public, then it is likely that the political support necessary to its continuance will evaporate. In fact, to the degree that fair, but strong, enforcement creates the reality of a "level playing field" for the entire regulated community, then that can be a source of support for the program. Increasingly, certainty or predictability is an attribute of environmental regulation which is highly valued by the regulated community.[2]

6. Balanced --- It is axiomatic that an agency must have a sufficient level of resources before it is able to carry out the full range of its mandated responsibilities. From an enforcement perspective, it is important that these resources be balanced in their distribution throughout the agency in order to form the full range of activities necessary to enforcement on a mutually supportive basis. For example, it does little good to have a very large inspection

force if available laboratory facilities cannot process samples in a fashion which produces timely results for enforcement actions.[3]

Each of the foregoing qualities or attributes is somewhat subjective in nature. There are no rigorous rules for assuring that a particular set of decisions will maximize achieving one or several of them. However, organizational decisions can help an enforcement and compliance program achieve these qualities. The last part of the following section discusses how this is so.

2 INSTITUTIONAL FUNCTIONS AND ORGANIZATIONAL STRUCTURES FOR AN ENFORCEMENT AND COMPLIANCE PROGRAM

2.1 Institutional Functions

The following discussion sets forth a generalized set of functions which are the component parts, or basis, of an effective compliance and enforcement program. It is possible that in some circumstances not every one of these needs to be present; however, experience suggests that the most effective programs will have the capacity to perform each function. It is clear that there can be a great deal of variety in the specific design of a particular function in a given program setting. Where these variations are important from an organizational perspective they are discussed in this section. However, the purpose of the following discussion is not to proscribe that design but rather to suggest the role the function plays within the overall context of enforcement and compliance. From an organizational perspective, it is important that each of these functions is mutually supportive and integrated one with another.

2.1.1 Clear and Applicable Standards of Conduct

The regulated entity must be aware of the standard of conduct to which it is expected to adhere. In general this standard of conduct is set forth as a set of qualitative or quantitative requirements applicable to the entity and designed to achieve a specific measure of environmental or public health protection. There are a variety of mechanisms by which this can be achieved. Individual facilities can be issued permits which contain discharge or emission limitations designed for the particular facility. In the alternative, orders can be administratively issued which impose specific obligations. Finally, standards of conduct can be imposed by statute or implementing regulation without further administrative action by an agency. However, most often it is the permit, or equivalent document, containing standards developed by the technical staff of the environmental agency which will be the instrument which, when violated, sustains subsequent enforcement actions.

To supplement this process of applying standards to particular entities, agency staff must often develop the technical basis for the standards, provide appropriate interpretation, and in some instances provide a range of technical or financial assistance. These functions are essentially beyond the permit; however, they may often be necessary precursors to its issuance or helpful to assure compliance, especially in the case of smaller organizations. As suggested below, while it is desirable that there is effective communication between the developers of permit requirements and the enforcement and compliance staff, it is not essential that these functions be actually integrated within the agency.

2.1.2 Inspection and Monitoring

There are a variety of ways to determine that facilities are in compliance with the requirements set forth in permits or otherwise. Generally speaking, these inspection and monitoring functions fall into two broad categories. There are those which are carried out by the facility itself and those which are carried out by government.

- Facility managed inspection can be that which is done for internal management to assure that compliance is being achieved. Facility managed inspection or monitoring can also occur as a result of government mandates. The government can require inspection and reporting of the results as a regular measure to assure that the facility is complying with legally binding requirements as set forth in a permit. However, the government may also merely require the reporting of information so that it is publicly available, such as is the case with the Toxics Reduction Inventory in the United States. The requirement to report is the only legally binding obligation.

- Government inspections of facilities are primarily for the purpose of assuring compliance. The nature, frequency, and style of these inspections can be quite variable depending on a very large number of factors. A complete discussion of the topic is beyond the scope of this paper but several points need to be emphasized. First, these inspections should always be carried out with the expectation that the results might lead to a formal enforcement action. Therefore they should be carried out so that all applicable legal requirements for an inspection are met. Second, in order to be efficient and to avoid missing violations, it is increasingly important to assure that inspections are carried out on an integrated basis. That is, all regulated discharges, whether to the land, air or water, are inspected at the same time, at least to an extent which allows preliminary screening regarding compliance status.

In addition to facility inspection, the conduct of ambient environmental monitoring by government or others, such as citizens or academic organizations, can occasionally provide information which leads back to a source or facility which, through a violation of legal requirements, is causing some form of environmental degradation.

An often overlooked component of effective monitoring is the requirement for adequate laboratory facilities to analyze samples which are obtained during the inspection process. Long delays, inaccurate results, and inability to analyze for important pollutants must be avoided.

2.1.3 Administrative Enforcement Authority

The hallmark of administrative enforcement action is that it can be initiated through the administrative action of the environmental agency. That is, the issuance of an order or some similar action is sufficient to trigger enforcement action without the intrusion of external formal judicial or other authorities. While there are wide variations in the type of administrative enforcement actions which might be available in various legal systems, there are several characteristics which are desirable components of a given system. Administrative enforcement should be able to take a variety of forms including: permit revocation or modification; issuance of administrative orders requiring specific performance; or actions imposing penalties. Also, since the substantive objective of administrative law enforcement is importantly connected to the policy objectives of the environmental agency, the process, while it must be fair, should not be independent of the agency.

2.1.4 Judicial Enforcement Authority

Based on my experience, often the final arbiter of compliance with the requirements of environmental statutes will be the external judicial system, even if only in an oversight or review role. However, in many national settings the more pro-active use of the judicial system appears to be a relatively under-used component of the enforcement system which is ready for development. The nature of judicial practice within a particular country's national legal system is so variable that it would appear overly ambitious to offer particular principles in this paper. There are, however, several judicial enforcement authorities which raise an important organizational issue. The authorities relate to the following:

- Violations of environmental requirements may be subject to prosecution under criminal law provisions. Generally, these prosecutions must be before some branch of the formal judicial system and are relatively independent of the environmental agency.

- The courts may often be available for relief in the nature of specific performance, especially where the environmental agency seeks a quickly enforceable order directing the defendant to either perform a specific action or to desist from some course of activity.

- There may be non-environmental provisions of a country's legal system which are not applicable through the administrative powers of an environmental agency but can nonetheless be a useful remedy for an environmental harm. They may only be applicable through, and enforceable by, the judicial system upon appropriate application by the government.

In each of the above instances, successful use of the judicial authority will necessarily depend upon careful coordination and utilization of resources.

2.1.5 Oversight

Oversight and evaluation allow the public and the regulated community to assure themselves that there are existing mechanisms which contribute to the achievement of effective and fair enforcement. Oversight can be provided through a variety of approaches such as legislative hearings, judicial review of agency actions as indicated above, agency accountability to the national executive, and the media.[4] How these entities exercise their oversight functions can also be an important aspect by which the enforcement program achieves visibility.

It is always necessary to assure that oversight does not become a barrier to effective enforcement through inappropriate intrusion into agency operations or relations with the regulated community.

2.2 Organizational Options

The purpose of the following discussion is to consider several options for organizing an enforcement and compliance program and to evaluate those options from the perspective of the issues which have been laid out in the foregoing discussion, that is, enforcement objectives and qualities and enforcement functions. There are also some observations about options for overcoming the weaknesses of particular organizational models.

2.2.1 Initial Considerations

However, before entering into a detailed consideration of organizational models, it is useful to consider two larger organizational issues which are important to compliance and enforcement programs. First is the question of the location of the environmental functions within the overall government. Second is the question of the range of substantive environmental issues which ought to be included within the agency, whatever organizational model for the agency is followed. Again, these two issues will be considered only from the perspective of enforcement objectives, qualities,and functions.

2.2.1.1 Location within the Executive

The essential locational question is addressed through two considerations: 1.) whether the environmental agency is at the ministerial level; and 2.) whether it is the part of some larger government organization, for example, a public works or public health agency.

There are a number of important factors which, when viewed from the perspective of effective enforcement, suggest that the environmental agency ought to be given ministerial or cabinet status. First, effective enforcement requires a high degree of political commitment to the substance of environmental protection and the reality of enforcement. Ministerial rank can be an

important symbol of that commitment. Second, again from a compliance perspective, other agencies of government are often the direct or indirect agents of environmental harm. Cabinet status allows the head of the environmental agency to confront those other agencies from a position of equality. Third, enhancing the status of an agency within government can often be a means of improving its political independence, and thus its will to carry out effective enforcement by allowing greater opportunity to develop a strong public constituency. Finally, cabinet level agencies may often have greater success both within the executive branch of government and vis a vis the legislature in competing for the financial resources so essential to build effective enforcement capacity. The United States is one of the few major countries where the environmental agency does not have cabinet status. This issue became a significant part of the environmental debate between the two candidates for President during the 1988 election. Subsequently, legislation was introduced into the Congress to elevate the agency but it has not yet been enacted into law. Enforcement issues, as discussed above, have not been among the reasons for this failure. It is also interesting to note that one of the apparent purposes behind the current evolution of environmental organization in the United Kingdom (combining water regulatory, the integrated inspectorate, and local waste authorities) is to establish a strong environmental protection agency at the cabinet level.

Many of the foregoing considerations also lead to the conclusion that it is rarely advantageous from an environmental perspective for environmental functions of government to be merged with relatively unrelated programs. In fact, such integration can often serve the cause of enforcement badly because the nature of the work of the other agency (for example, public health) is not primarily regulatory in nature. In some circumstances, such as for small governments where consideration of economies of scale may be a factor, it may be useful to consider such combinations. For example, an environmental agency and a public health agency could usefully be combined in order to share common laboratory facilities which it might not be possible to otherwise duplicate. Of course, this same sharing activity could take place through agreement between two independent agencies.

2.2.1.2 Range of substantive issues

Consideration of the breadth of substantive issues which ought to be placed within an environmental protection agency is a complex matter, and its resolution will depend upon both the prior experiences about government organization and the expectations of various interests in society. As a theoretical proposition, two thoughts about the nature of environmental programs are useful. The first has to do with the way programs operate. Many programs can be characterized as largely management in nature; that is, the programmatic responsibility to manage a resource which is in the public domain such as parkland or wildlife. Other programs are largely regulatory in nature. That is, regulatory systems are developed for directing activity which may affect adversely a public value, such as the discharge of pollutants to a water body. In fact, these distinctions are often very imprecise because, for example, successful management may require regulation and vice versa. However, when this question is viewed from the enforcement perspective, it then becomes apparent that at least those environmental programs which are primarily regulatory in nature, and therefore have a strong enforcement potential, ought to be within the same agency. A second basis for distinguishing among programs is whether they primarily relate to problems associated with pollution discharged to the environment or to the protection of natural resources. Again, those programs which relate primarily to pollutants will tend to have a stronger regulatory component and therefore ought to be organized together.[5] From the enforcement perspective, unifying the organization of those regulatory programs relating to pollutants also makes sense because it allows for a more integrated and therefore efficient use of enforcement resources. For example, an inspection of a manufacturing facility which can examine the full range of possible pollutants whether discharged to the air, water, or land will be much more efficient and effective than would a series of fragmentary inspections focused on particular media, water, or only a narrow class of pollutants, for example toxics.

This discussion suggests that the following general organizational decisions would maximize the effectiveness of an environmental compliance and enforcement program.

- The environmental agency should be located at the cabinet level of government;

- The environmental agency should stand alone and not be combined with relatively unrelated programs; and

- The environmental agency should at least include all of those programs which are primarily regulatory in nature and which relate to the management of pollution.

2.2.2 The Three Organizational Options

Initial examination of the environmental organizations of a number of countries would suggest that there is a bewildering range of possibilities. While the variety is, in fact, extensive, there are two major options which can be thought of as functionally defining the extreme ends of a spectrum across which can be arrayed most of the various existing organizations. At one end of the spectrum is the environmental agency which contains essentially all of the management functions[6] as well as all of the enforcement functions (in the following discussion the term "unitary agency" will be used to describe this option). At the other end of the spectrum is the organizational structure where the enforcement and compliance functions, including compliance inspection activities, are located in an organizational unit completely separate from the environmental management agency, such as within the state law enforcement agency (this will be referred to as the "divided agency"). A third option, located in the mid-range of the spectrum, is that where essentially all environmental management functions, including enforcement related inspections, together with the lawyers necessary to carry out administrative enforcement are located within the environmental management agency while the judicial enforcement functions are within the law enforcement agency (the "traditional option").[7]

2.2.2.1 The unitary agency

The unitary agency option offers a series of distinct advantages which are obviously derived from the fact that all enforcement, compliance, and regulatory functions are located within one agency and managed under the direction of a common authority. These functions include permit writing, inspection, and the conduct of administrative and judicial law enforcement. A notable example of this option is found in the Department of Environmental Resources of the Commonwealth of Pennsylvania. This agency was created in 1970 and, pursuant to specific statutory language, embodies all functions relating to enforcement and compliance activities. This agency also exists at the cabinet level of government and has within its authorities the full range of environmental pollution and resource management functions.

The advantages of the unitary agency include the following:

1. In principle, all of the resources of the agency (particularly those devoted to enforcement and compliance) are directed at the same set of strategic objectives. Directing resources according to a common set of objectives strengthens the likelihood that a coherent and persuasive environmental strategy will be achieved.

2. A further advantage of deploying the management and enforcement resources pursuant to a common strategy is that it gives a clearer external picture to both the regulated community and the general public, thus advancing the sense of a "level playing field" and public confidence.

3. Communication opportunities between different functions which must contribute to effective enforcement are potentially maximized. For example, effective enforcement is often dependent on permits which are written in a way which facilitates enforcement. Understanding the nuances of this issue and assuring that appropriate permits are written is maximized if the permit writers, field inspectors and enforcement staff are in the same agency.

4. A unitary agency will often have relatively significant resources available and can therefore have greater flexibility in directing these resources at the most crucial problems, including the needs of enforcement. Conversely, resources within the agency will not be diverted to non environmental issues.

5. The results which are agreed to in negotiated settlements of enforcement actions are often critical to defining the agency's strategic and tactical objectives. The unitary agency can assure that negotiated settlements embody principles which are supportive of those objectives and, even more importantly, that results are not reached which are in conflict.

6. In an effective enforcement program, the relationships between its various functions needs to be carefully coordinated. Thus, agency administrative actions ought to be considered in the light of the bearing which they will have on subsequent possible criminal enforcement actions or lawsuits seeking specific performance. Designing and carrying out this complicated set of relationships is most effective when the task is not divided between two agencies.

7. A unitary agency can have a well developed capacity to bring additional resources, such as technical or financial assistance, to help regulated entities with limited means achieve compliance.

2.2.2.2 The divided agency model

In the divided agency model, the environmental management functions are located in one agency, while activities focused especially on enforcement and compliance are carried out in another agency. As a theoretical proposition this option could include all enforcement related inspection activities in the law enforcement agency. This would be quite analogous to the investigative functions associated with traditional criminal law being located in the law enforcement agency, as is the case with the Federal Bureau of Investigation in the U. S. Department of Justice. In fact, it does not appear that this approach is followed with respect to environmental enforcement. There are some examples, such as the Attorney General's office in New York State, where there are investigative resources in the law enforcement agency but these are supplemental to the extensive inspection resources located in the environmental agency. Accordingly, typically the law enforcement agency will exercise administrative and judicial law enforcement functions through a staff predominantly composed of lawyers and will depend on the environmental management agency for most supporting services such as inspection or laboratory work. However, as suggested, a specialized investigatory staff may be ideally associated with the law enforcement agency. Advantages of this model are:

1. Environmental law enforcement will be likely to be associated with more of the attributes and tools of routine law enforcement. Thus, for example, the use of criminal prosecutions may tend to be more common where appropriate or specialized surveillance techniques may be more readily available.

2. In many settings, the government's law enforcement functions, as carried out by a high level prosecutorial office, are relatively insulated from political or other inappropriate influence, and therefore the possibilities of an effective environmental enforcement program may be maximized.

3. The state's law enforcement officials may have more ready access to the judicial system and therefore to the extent that environmental enforcement is a priority for the law agency, those cases may be more likely to advance rapidly within the judicial setting.

4. The law enforcement agency can serve as a coordinating mechanism for bringing to bear in the enforcement process resources of government which might not be readily available

to the environmental agency. For example, government information in the securities or tax area might be used in coordination with environmental data to advance compliance actions.

2.2.2.3 The traditional option

The traditional option locates all environmental management functions, together with the staff (which may or may not include lawyers, depending upon the nature of the administrative law system) necessary to carry out any relevant administrative enforcement activities within one agency. This option essentially reserves to the law enforcement agency the authority to carry out judicial enforcement. As with the divided agency option, the lawyers in the law enforcement agency are generally dependent on the environmental agency staff for carrying out all of the functions relating to determining standards of conduct, issuing permits, and inspection activities. However, they will have the capacity to utilize the resources pecularily associated with law enforcement activities. The relationship between the U. S. Environmental Protection Agency and the Department of Justice is typical of this traditional approach.

This option carries with it most of the advantages of the unitary option except that in the case of judicial enforcement the problems of coordination between two distinct agencies become paramount. These problems can result in slow and somewhat inefficient use of the judicial system and perhaps some divergence in strategy between the two agencies. One of the most notable examples of this divergence occurred when the Attorney General of a state in the United States sued the environmental agency in order to prevent it from taking certain enforcement actions.

2.2.3 Supplemental Organizational Strategies

Over the years there have been attempts to develop new organizational tools which address the problem of effective enforcement by adding new elements to the approaches set forth in the foregoing discussion. One of these is the so-called "Environmental Strike Force" and the other is the recently developed idea of the integrated inspectorate.

The Environmental Strike Force

The environmental strike force is an idea which builds on the concept of law enforcement strike forces which have been used in other regulatory areas, such as organized crime and drug enforcement. The core of the idea is the establishment of a small, independent unit primarily made up of lawyers clothed with substantial authority to carry out the full range of environmental investigation and enforcement functions --- a unit which can act quickly and with a high degree of publicity. The creation of such units in states such as Pennsylvania and California during the early nineteen-seventies reflected a growing social and political commitment to enforce environmental statutes.

The creation of a strike force often results from the action of a senior level political figure, and, as a result, a strike force rarely outlasts the tenure of that individual. It also usually is highly dependent on the field and laboratory investigative resources of the traditional agencies as well as the body of permitting or related actions which it has taken. It often can call upon extraordinary law enforcement assets and can command special attention in the courts. Accordingly, the environmental strike force can be a way of merging the positive attributes of the two extreme theoretical options discussed above. In this regard, it can greatly enhance the visibility and reality of effective environmental law enforcement. The strike force is, however, ultimately dependent on the environmental agency for the routine work which provides the base for all enforcement and compliance. Its somewhat elite character and transitory nature does not make it a long lasting mechanism by which to achieve effective environmental law enforcement.

Integrated Inspectorates

Integrated environmental inspectorates are a more recent development which, it is argued, can contribute to more effective enforcement. They have received the greatest attention in Europe and variations on the theme are being developed in at least England, Sweden, and Holland. The

most fundamental conceptualization of an integrated inspectorate is based on the idea of focusing government resources on regulated facilities on a unified basis. Thus, when permits are written or inspections are carried out, all potential avenues by which pollution can enter the larger environment are considered and all pollutants of concern are evaluated at the same time. It is suggested that in an ideal integrated inspectorate, the permitting process and the inspection process of the agency would be carried out on a unified basis. That is, the same individuals responsible for permit writing would also be involved in the inspection process.[8]

In theory an integrated inspectorate can go far, through enhanced efficiency and consistency, to advance the objectives and achieve the qualities of an effective enforcement program. However, the actual experience with these organizational options is sufficiently new that whether practice will produce the benefits remains to be seen. In any case, the utilization of integrated inspectorates should not be allowed to go forward in a vacuum. The inspectorate ought to be an integral part of the environmental agency so that it is closely tied to the strategic planning and standard setting functions and does not begin to create a whole new set of strategic objectives. There must be effective coordination with actual law enforcement staff if compliance objectives are to be met. This may actually be achieved by making the enforcement staff such as lawyers part of the integrated inspectorate teams.[9] The noted organizational changes in the United Kingdom seem to be responsive to this need for effective coordination.

2.2.4 Discussion

Experience suggests that, in considering which end of the spectrum ought to define the best option, most often the advantages of the unitary agency approach outweigh those of the divided agency or traditional agency approaches.[10] The listed advantages of each are real; however, those associated with the unitary agency go far to advance the earlier stated objectives and qualities of an effective enforcement and compliance program. Especially important in this regard are the enhanced ability to achieve a common strategy, maximize communication, and efficiently deploy resources. These advantages are very hard, if not impossible, to achieve routinely over time in the divided agency setting. On the other hand, many of the advantages of the divided agency model, such as its high visibility or speedy access to the courts, can be achieved either within the unitary agency through management decisions or by agreement and cooperation with the law enforcement agency.

While the traditional agency approach goes far to overcome the divided agency problems, it does not easily do so for judicial enforcement activities. And, as suggested in the discussion of the judicial function, there is a growing need to use these authorities in environmental enforcement and compliance programs. Unfortunately, the effectiveness of so doing may be compromised by the organizational limitations of the traditional agency approach. While the traditional agency approach is a common compromise between the two extremes, other than as dictated by tradition, there seems no substantial reason to be bound by this compromise and the opportunities afforded by effective judicial enforcement argue that it be avoided, if possible.

While the strike force variant may be ephemeral, it can achieve a few important objectives which are primarily to correct serious violations and project high visibility. On the other hand, the integrated inspectorate is likely to become a much more substantial component of an effective environmental agency. As such, it may well be a vehicle for also providing a greater level of effectiveness to environmental enforcement and compliance.

For each of the approaches discussed --- unitary, divided, and traditional --- questions remain about how close the routine activities of environmental management can, or should, be associated with enforcement and compliance activities. The following are examples:

- Should field inspectors be authorized to take enforcement action, i.e., issue an order directing corrective action, in the course of routine inspections?

- Should the writing of permits or the establishment of standards be constrained by enforcement and compliance considerations?

- Should environmental data which is reported by a facility be the basis of enforcement or compliance actions where violations are disclosed?

An affirmative answer to the above questions, and to similar ones, will advance the capacity of the environmental agency to achieve the qualities associated with an effective enforcement program because they enhance effective use of scarce resources. While such questions are not usually fundamental, in an organizational sense, they exemplify tactical advantages for enforcement which can be achieved through even modest organizational decisions. These kinds of decisions can also often be most easily implemented in the context of the unitary agency. Where various responsibilities are divided among agencies the management problems begin to grow significantly. However senior officials should be aware that simply creating a unified agency does not fully address compliance and enforcement organizational matters. It is equally important to assure, as the foregoing issues illustrate, that the agency is effectively managed for the objectives set forth at the beginning of this paper.

2.2.5 Factors Relating to Decentralization

The size or regional diversity of a country and the general nature of how it is governed can strongly influence how organization for effective enforcement might take place. A large country or one with great regional variation may chose to organize its environmental agency with a strong regional makeup. Similarly, in a country with a system of federal government, where states have effective and often independent powers and authorities, there are important problems in rationalizing federal authority with that of the states.[11] Both of these situations create some similar problems for effective enforcement and, to a varying degree, some opportunities for improvement in enforcement.

Decentralization poses serious problems for consistency of enforcement. Where decentralization exists because of size or regional considerations, the problems can, at least in theory, be overcome through strong management. In addition, variations in enforcement which are positively responsive to local conditions can enhance the overall effectiveness of the national enforcement program. In addition to the general management question, there is also the issue of how many of the enforcement functions ought to be de-centralized. Should they include initiation and settlement of lawsuits, as well as the permitting and inspection functions. Answers may vary in particular settings, but as decentralization includes more elements the larger is the management problem. Resources must be devoted to it. In addition, to the extent that responsibilities are divided among a number of agencies at the national level, then the management problem is even further confounded.

In a federal system, the problem is not whether to decentralize (that is a functional given) but how to coordinate in an effective way. This situation can offer an enormous advantage for the overall conduct of enforcement. The addition of state resources to those of the national government can substantially increase total resources devoted to enforcement. This can be powerful when the resources are deployed pursuant to a common strategy. While detailed consideration of managing this relationship is beyond the scope of this paper and, in any case, can only be resolved in the experience of each country, there are some observations that are useful. In essence the problem for the federal government becomes one of defining how it exercises coordination and oversight of state authorities and actions in a way which advances the objectives of effective enforcement. Performing this function consists of the establishment of overarching policy and a defined set of authorities at the federal level. At the same time, the federal authority should seek those opportunities which will maximize the effectiveness of the state authority within those overarching policies. These actions can take the form of standard setting, training, providing specialized resources, such as aerial surveillance, and financial support. While often difficult, the federal structure can offer one of the most rewarding opportunities for a national environmental agency to reach out to others to multiply the effectiveness of enforcement and compliance programs.

3 CONCLUSION

The fundamental objectives of environmental enforcement are deterrence, punishment, and correction of violations. To achieve these objectives, enforcement activities need to be characterized as efficient, visible, fair, and subject to oversight. Below is a chart which sets forth one interpretation of these relationships. The reader may have others.

How government is organized can affect its ability to meet some of these qualities and objectives. There is an optimal model of organization which integrates all of the enforcement functions in one agency which operates them in recognition of possible roles for other participants including local units of government, industry and the citizenry. An integration of all of these values and functions in a particular national setting will yield one of the ideal models for organizing for compliance and enforcement.

QUALITIES FOR ENFORCEMENT	ORGANIZATIONAL MODELS				
	UNITARY	TRADI-TIONAL	DIVIDED	STRIKE FORCE	INTEGRATED INSPECTORATE
Strategic	+	+	-	+	o
Efficient	+	+	-	o	+
Swift	-	+	-	+	o
Visible	o	o	+	+	o
Fair	+	o	o	o	+
Balanced	+	+	o	-	o
INSTITUTIONAL FUNCTIONS OF ENFORCEMENT					
Standards	+	+	o	-	o
Inspection	+	+	o	o	+
Administrative	+	+	o	o	+
Judicial	o	o	+	+	o
Oversight	o	o	-	-	-

+ = Positive; - = Negative; o = Neutral

ENDNOTES

1. The mention of penalties raises the entire question of where penalties ought to go and the related issues about how to fund agency program activities. Organizing for enforcement is enhanced if penalties are able to be utilized directly by the agency for increasing its resources. There are other sources of funds which can also be used in this way such as permit fees and special purpose taxes.

2. The idea of fairness does not mean that every violator has to be the subject of an enforcement action. This is often patently impractical. It does mean that those subject to enforcement action ought, on the whole, to be treated in approximately the same way.

3. Of course, if this is unavoidable then there are enforcement strategies which can maximize the effectiveness of inspectors who are not backed up by analytical results from laboratories.

4. While media oversight is the most informal mechanism because it usually cannot be structured through government policy, it may be the most powerful because of the direct linkage to the public.

5. It is important that these distinctions not be overstated. Obviously many resource oriented programs have major regulatory components such as is the case in protecting endangered species. However, the distinctions are useful at least as organizing principles for purposes of decision making.

6. For purposes of this discussion, environmental management functions include such tasks as scientific review or research, strategic planning, standards setting and permit issuance.

7. Of course, in neither model will the actual conduct of the judicial function be within the agency. The administrative review authority may or may not be located in the unitary agency. It is rarely, if ever, located within the law enforcement agency of the divided model but may be in the environmental management agency.

8. In some legal systems it is necessary to insulate criminal investigators from those who carry out the routine tasks of the agency, and an integrated inspectorate would have to be modified to take this into account.

9. A further example of the efficiency associated with the integrated inspectorate relates to the use of monitoring data which is supplied by the regulated community. In an integrated inspectorate this data might be supplied to the inspection staff and is, on the one hand, easily verified against permit requirements and on the other readily available to enforcement personnel where appropriate.

10. A recent report of the Administrative Conference of the U. S. reaches a similar conclusion. The report is entitled "Report on the Federal Administrative Judiciary."

11. In some nations municipalities can play just as important a role as do states or provinces.

DEVELOPING AN EFFECTIVE COMPLIANCE MONITORING CAPABILITY

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SUMMARY

This paper deals with the developing of an effective compliance monitoring capability in the Netherlands.

1 BETWEEN DREAM AND ACTION

When we are talking about enforcement in the Netherlands, it's in the context of a small, crowded and polluted country.Fifteen million people are living and working on 37.000 square kilometers. Quite aside from a high population density we are dealing with a concentration of activities which burden and pollute the environment like extensive chemical industry and equally extensive arable and livestock farming. The environmental impact of our polluting and polluted delta makes itself felt in all parts of the world.

The Netherlands has a clear interest in comprehensive environmental measures at a European, if not mondial level.

It's high level of environmental "stress", however, obliges it to aim at a high level of protection, nationally, regionally and locally.

2 ENVIRONMENTAL POLICY

In May 1989 the government presented its Environmental Policy Plan "To choose or to loose" setting out reduction targets of polluting emissions up to 80-90 per cent from existing levels, for the mid-term. In order to achieve the ambitious objectives of this National Environmental Policy Plan, regulations need to be strengthened and expanded and certainly better implemented. This means an extra challenge in enforcing those regulations.In connection with the Plan substantial financial means were given by the Government to the municipalities, the provinces, the Public Prosecutors and the Police.

In the NEPP the following instruments are formulated:

- legislation
- voluntary agreements formally laid down
- financial incentives
- public information, education, communication
- enforcement, including sanctions

Although the emphasis of this paper lies on enforcement it is important to stress the merits of having such an overall policy plan. It clarifies the roles and expected actions of all parties concerned and it facilitates the setting of priorities for enforcement.

3 ENFORCEMENT; WHO DOES WHAT?

In the Netherlands the implementation of environmental policy is highly decentralized. The authority responsible for implementing a given statute or other legal requirement, including the granting of permits, is entitled to enforce - administratively or civilly - that law. The levels of government are as follows:

14 ministries

9 regions for the Inspectorate for the Environment
12 provinces
27 water(quality)managementsboards
643 municipalities
59 intermunicipal regions
26 police districts

The municipalities are, roughly speaking, responsible for enforcing the regulations and permits of nearly all of the 400.000 businesses and plants in the country.The 12 provinces are entitled to enforce the permits for approximately 3000 bigger plants, including landfills. Only a comparatively minor part of the enforcement activities is carried out by the national government (Inspectorate for the Environment): the Pesticides Act, the Toxic Substances Act, the Nuclear Energy Act and parts of the Hazardous Waste Act, Clean Air Act and Water Pollution Act.The police, the Public Prosecutors, and a number of compliance monitoring officers of various authorities are appointed by the Minister of Justice as special detectives for environmental crimes. They are entitled to enforce all standards, regulations and permits, where criminal enforcement is appropriate.

At this moment the environmental monitoring and enforcement is executed by a taskforce of around 1500 fulltime equivalents:

Municipalities and intermunicipal groups: 800
Provinces: 250
Public Prosecutors: 40
Police (regional coördination): ±100
Environmental Inspectorate (first line): 50
Waterboards: 100, etc.

Allthough the numbers of municipal and provincial officers are expected to grow substantially in the coming years, due to the financial boost mentioned before, the most spectacular increase is planned for the police. Up to 2000 police-officers will get additional training in the near future to enable the police to play an adequate role in environmental enforcement.

3.1 Inspectorate for the Environment

Organized in a central office and 9 regional offices the 300 employees of the Inspectorate for the Environment carry out the enforcement activities (first line), that are the responsibility of the Ministry. They also monitor and promote the execution of licensing and enforcement activities by other authorities (second line). The Ministry is advised by the Inspectorate on matters concerning enforcability and feasibility of proposed laws and regulations.

3.2 Police

What is the role of the police in environmental enforcement? The administrative authorities have first responsibility in compliance monitoring and administrative and civil enforcement. Generally speaking the police has a supportive role when, and in sofar, the need for "stronger measures" arises. Being on the streets around the clock, the police however do a competent job of detecting environmental violations. They are supposed to look for such violations, whether they concern national law, provincial law, or a municipal bylaw, or violations of the legal requirements of an environmental permit.

In addition to the efforts of the central government the police have developed a number of initiatives in recent years at both regional and local levels, with the intention of giving greater substance to their environmental duties. These include the establishment of environmental departments in a number of municipal police forces and appointing district coordinators in the National Police Force.

3.3 Public Prosecutor

In most districts one or more Public Prosecutors are involved in the enforcement of environmental legislation, at least for part of the time. In order to allow the high priority being given to a cleaner environment to be manifested in an effective criminal policy, a new consultation structure has been created within the Public Prosecutions Department to coordinate policy relating to the enforcement of environmental legislation. In 1990 19 additional personnel positions were created to reinforce the staff at the district offices.
Public prosecutors have the exclusive authority to bring cases to court where there is a criminal code violation, which is the case for violations of most of the environmental regulations.

They participate in a tripartite system of consultation involving the police and the mayor, that is set up in three-quarters of the municipalities.While maintaining their own responsibility in relation to criminal code violations, public prosecutors appear willing to adjust their actions as far as possible to the enforcement activities/priorities of the administrative authorities. Exchange of information between these parties develops rapidly.

4 THE ROAD TO ADEQUATE COMPLIANCE MONITORING AND ENFORCEMENT

In the Netherlands enforcement became effective from the mid-1980s onwards; especially after a number of scandals concerning the illegal dumping and discharging of hazardous waste. Politically it became obvious that something had to be done about the existing backlog in the enforcement area. A program was set up by the Ministry to intensify the enforcement of hazardous waste regulations. This was the Multi-Year Intensification Program for the Enforcement of the Regulations on Hazardous Waste (1984-1990). The program intensified enforcement where the Ministry itself was responsible, and stimulated and financially supported enforcement activities to be carried out by other authorities.

Hazardous waste was given priority under the program because of its great risks to the environment.

The Multi-Year program was also used to encourage the local police and the Public Prosecutors to take a greater interest in the enforcement of environmental legislation. A conscious decision was made not to set up a separate environmental police force in the Netherlands:The government was convinced from the outset that the local police, being on patrol 24 hours a day and well-versed in criminal law, could play an extremely important role in the enforcement of environmental legislation.

In retrospect the approach of the Multi-Year Program made sense in more then one way:

- Local authorities reacted positively to the financal incentives in the so-called "dime-projects"
- Proposals to participate in and benefit from the program had to be specific on parties to be monitored, and method of monitoring and enforcement in a step by step approach.
- It also improved the cooperation between all parties involved in these projects: Officials from municipalities, Inspectorate, police etc. learned to work together in a way that was systematic and lead to visible result.
- Due to this program, the setting up of a network has been partially achieved. The involvement of the police and the Public Prosecutors Department increased considerably.

Particular attention has been paid to the training of officials responsible for enforcing environmental regulations. Courses have been arranged not only for the staff of the Inspectorate for the Environment, but also for local government officials.

Network-building and distribution of essential knowledge and information have benefited from the magazine "Handhaving" (Enforcement), that appears monthly and has a circulation of 13.000 copies. It is attractive and appeals to enforcers because they can report themselves about their field-experiences.

Brochures have been drawn up in recent years for the benefit of companies which, together with informative visits, have resulted in a improved compliance with the Chemical Waste Act and other environmental legislation.

When the Multi-Year Intensification Program was about halfway to its term(1987) a need was felt to extend the attention to enforcement in other sectors and a project was started that contained an extended and multimedia approach. The main elements of this program (VHIP) are:

1. Improvement of enforcement through:
- structuring: Enforcement must become an ordinary, acknowledged, non-negotiable duty for the authorities concerned.
- Intensification: The compliance monitoring must be increased; businesses must be visited at a certain frequency and in a systematic way. Violations must be dealt with using standard methods that lead to timely and appropriate action.
- Integration: Measures that are aimed at sources of pollution are as much as possible drawn up as multimedia measures aimed at one industrial branche and applicable to all individual firms of that branche. Multi-media approach seems preferable to an approach targeting each environmental sector separately. It makes compliance monitoring more efficient and effective.

2. Setting of priorities:

Everyday practice and the limited staff and means necessitate the setting of priorities for enforcement in the Netherlands. Enforcement priority should be given to businesses and branches of industrie where compliance monitoring and enforcement activities yield the greatest environmental benefit. In this manner the major environmental violators will receive the greatest attention.

Comprehensive documentation has also been produced for most relevant areas for the benefit of provincial and municipal officials. To allow a uniform and, more important, representative method to be employed in sampling and analysis for instance, the Inspectorate for the Environment has drawn up a guideline "Sampling and the Chemical Waste Act".

5 STRUCTURING THE ENFORCEMENT

Due to the substantial financial means given by the goverment to the municipalities,provinces, police and Public Prosecutors to achieve the ambitious objectives of the NEPP there is a growing capacity in the enforcement area. Connected with this growing capacity the need for more cohesiveness also grows.

At the initiative of the Inspectorate for the Environment, a model was designed in 1990 together with representatives of all agencies and ministries, including the police and the Public Prosecutors. The main elements of this model are as follows:

- annual planning of enforcement activities by all agencies, including the police, on the three levels of government national, provincial and regional;
- use of municipal cooperatives as the core of the enforcement implementation; five to fifteen municipalities working together on the regional level;
- financing the cost of enforcement on the basis of performance commitments (business-like partnerships);
- establishment of structural deliberative bodies (groups concerned with enforcement matters) at the three levels of government (civil servant platforms as well as platforms for elected administrators).
- in dealing with common environmental offences, the Public Prosecutor should, as far as possible and without prejudice to his own responsibility, work with the priorities set by the administrative authorities;

The "elected administrators" platform on the national level is formed by the National Coordinating Committee for Environmental Law Enforcement (LCCM). The main target of the LCCM is monitoring and stimulating the implementation of the enforcement structure as described

above, at all three levels of government. The LCCM also seeks to detect bottlenecks and to provide solutions (e.g. making an Enforcement Structure Manual).

The main targets of this enforcement structure, which should be implemented and working before 1995, are:

- all participants marching together in planning and executing compliance monitoring and enforcement;
- realization of an integrated multi-media approach;
- the administrative authorities on the one hand and the police and the Public Prosecutors on the other marching together (not two separate circuits!)

* Note that in the Netherlands, in or rather after compliance monitoring by civil servants, in most cases a decision can be made either to choose the administrative, the civil, or the criminal option of enforcement. It is important to note that in the Netherlands most compliance monitoring and enforcement activities do not result in lawsuits. People in the Netherlands, generally speaking, are not particularly fond of suing people and/or businesses and most cases are solved before they would have been taken to court.

Administrative tools for enforcement are: administrative penalty, (partial) closure, administrative coercion and revoking of permit.

Civil tools, based on tort law, are: damage recovery claims (soil-cleanup), cases against companies to prohibit or demand certain activities.

Criminal tools (mostly based on the Economic Offences Act): imprisonment, fine, payment of financial equivalent to the economic advantage derived from illegal conduct, obligation of restoration/preservation, closedown for a maximum of one year. Moreover certain provisional and coercive measures can be taken immediately.

With respect to the place of Criminal Law in the enforcement of environmental law, the following distinction is made in the Netherlands:

- serious (sometimes organized) environmental crime;
- frequently occuring, less serious environmental crime;

Obviously the police and Public Prosecutors are predominantly involved in cases of the first kind. In cases of the second kind primary responsibility rests with the administrative authorities. If administrative possibilities are non-existent, inadequate and/or exhausted , prosecution is to be considered; the penal provision functions as the "gorilla in the closet".

It should be mentioned the gorilla on occasion leaves the closet when administrative authorities are lax or unwilling to insure compliance by adequate measures.

6 WHAT HAS BEEN DONE?

The approach used by the Ministry of Housing, Physical Planning and Environment and its Inspectorate for the Environment to define and implement environmental policy can be caracterized as THINK BIG, ACT SMALL.

The Ministry produced its environmental policy plan (shortly followed by NEPP+) and initiated the designing of an organizational model for the enforcement structure in the Netherlands. While" thinking big" it visualised a large and ambitious concept for the short and mid-term. Given the fact that traditionally the implementation of environmental policy(like most other policies) is highly decentralized, there is an obvious need for the government to:

- insure that both the central and local levels of government build the necessary capacity to assess compliance;
- provide financial incentives;
- support with training, information and every facility needed;
- promote the sharing of succesfull experiences;
- introduce a practice of business-like relationships between the government and other authorities;

- to monitor the quantity and quality of progress made towards the goals set in the NEPP+ and enforcement model;
- to increase the efficiency in permitting and inspection work by developing standard regulations for many standard types of small industries;

In short: there is a need for many different small actions and initiatives to pave the way towards the envisioned targets.

7 1992: WHERE DO WE STAND?

As a result of a tremendous effort during the last decade to shape conditions for an adequate compliance monitoring and enforcement capability a respectable forwards momentum has been achieved;

- among the steadily growing ranks of officials involved a sense of "common professionalism" prevails;
- two-way communication has been set up, resulting in positive feedback and open criticism;
- working in a systematic way with uniform enforcement methods is becoming the rule rather then the exception; at least in theory;
- with the achievement of clear results there is a growing sense of enforcement being exciting, which in itself is culture-building.

However, a lot still remains to be done. In many cases enforcement activities are frustrated by one or more of the following causes:

- There is a backlog in licensing: About half of the plants/industries in the Netherlands is still functioning without a permit, without an adequate permit or has not even applied for a permit.
- Laws and regulations change constantly and some badly needed regulations are produced at snails-pace on account of heavy lobbying and pressure: In one province alone about 7000 plant- and fruitgrowing greenhouse-industries function without the necessary permits. Integrated regulations for this branche have been on the agenda for years, but final decisions are put of time and again.
- In some cases permits can only be issued on the basis of an approved (by the Minister) Provincial Plan; for instance a waste Disposal Plan. Individual plants can not be blaimed for the fact that a Provincial Plan is lacking!
- About 30 environmental laws exist in the Netherlands, with a multitude of provincial and municipal regulations based on these laws. This makes compliance monitoring and especially using a multi-media approach extremely complicated at times: Six formal procedures are prescribed for instance to monitor the handling of chemical waste; "standard", "shipping", "small", "EEC", "residual oil" and "low-risk export". They are all based on the Hazardous Waste Act and have their own forms and procedures.

A clear choice has been made to concentrate the programming and execution of enforcement of environmental laws on the regional level. The appears to be a viable choice IF and IN SOFAR the officials responsible for the regional enforcement task will have enough mandate to steer clear of the daily hassle caused by conflicting economic interests.

8 EPILOGUE

From practically nothing a great deal has been achieved in one decade. Compliance monitoring and enforcement are firmly on the political agenda as necessary instruments for implementing the strategy. A start has been made on building up enforcement structures; more actual enforcement is occuring and money and manpower have been made available. A tremendous amount of work remains to be done to develop solid standards for compliance

monitoring work and enforcement. What constitutes an adequate monitoring visit? How frequently should certain categories of plants be visited? The guidelines in use leave a lot to be desired. Practical tools should be developed to enable the setting of essential priorities: less "bean counting" and greater benefit for the environment. A target has been set for the realisation of an adequate level of performance for licensing, monitoring of compliance and enforcement, for january 1995. A terrific effort is still to be made to meet this target. This is a challenge, but a challenge that has to be met, since the environment cannot afford failing experiments.

INTEGRATED LICENSING, IMPLEMENTING AND COMPLIANCE MONITORING

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1 INTRODUCTION

As stressed in the UNCED Agenda 21, the ability of a country to follow sustainable development paths is determined to a large extent by the capability of its people and its institutions as well as by its ecological and geographical conditions. Agenda 21 thus calls for strengthening national capabilities in order to enhance countries' abilities to devise sustainable development policies and strategies.

Development of a legislative framework is certainly one element of the overall capacity building. However, it is far from being enough, and constant follow-up of the implementation of those regulatory measures must be ensured, leading eventually to their improvement.

In this presentation, I would like to focus on the promotion of sustainable industrial activities, and raise 3 main points:

1. The need for an integrated approach.
2. The need for a permitting scheme based on environmental and risk assessment studies.
3. The need for compliance monitoring.

These comments are based on a report, "From Regulations to Industry Compliance : Building Institutional Capabilities"*, based on examples from both developed and developing countries, which the UNEP IE/PAC has just published.

2 THE NEED FOR AN INTEGRATED APPROACH

All too often environmental laws have been designed to tackle a single medium problem such as water pollution, air pollution, solid waste. But this division of the environment into separate media fails to recognize that pollutants move from one medium to another. A very successful air emissions reduction programme, for example, can merely transfer the pollutants to another media. Successful measures to treat water discharges could simply result in the creation of sludges that are subsequently landfilled, causing soil contamination and underground water pollution, not too mention health and safety hazards.

To enforce single medium laws, authorities naturally respond by developing a system of single medium enforcement. Inevitably, this causes a situation where those enforcing air pollution laws are at odds with those enforcing water pollution laws. Compliance with air pollution standards, for example, might lead to reduced air emissions but increase effluents for water authorities to deal with. A non-integrated approach also tends to encourage traditional, end-of-pipe controls (e.g. filters, scrubbers, cooling towers, electrostatic precipitators) which not only tend to transfer pollutants from one medium to another, but which, despite considerable investment costs, bring no economic payback. An integrated approach, on the other hand, encourages at-source, cleaner production measures, reducing the amount of wastes to be disposed of, minimizing energy and raw material consumption, and preventing pollutants from appearing in any medium.

A single medium approach also means that different agencies are inspecting the same plant, requiring facilities to fill our forms and provide much of the same information. This can cause confusion for a company not to mention added paperwork, duplication of effort and disregard for public authorities' administrative complexity and inconsistency.

To avoid these problems, the development of an integrated approach is indispensable. The single medium focus needs to be shifted to a multi-media focus on all releases of pollution from their source, namely industrial facilities. Such an integrated approach allows pollutants to be followed from

one medium to another. One integrated permit can then be issued to each regulated facility, and integrated inspections can be conducted by a single agency - or at least real and effective coordination between media-specific agencies.

Even if the laws themselves are still developed on a single medium, the inspection (and the inspectorate organization) should take into consideration the total environmental impact of a facility and ensure that the overall damage to the environment is minimal. Corrective measures within the single permitting system should ensure minimum integrated environmental damages as the plant manager is stimulated to minimize the plant's overall releases.

3 PROPOSAL FOR A PERMITTING SCHEME, BASED ON ENVIRONMENTAL IMPACT AND RISK ASSESSMENT STUDIES

Once environmental policies and standards have been defined, a permit should be seen as a legal prerequisite to do business. Without it, or in violation of it, a facility should not be able to operate legally. In many countries, potentially polluting facilities now must receive from government an environmental permit (also called licence or authorization) before they are permitted to operate. The purpose of the procedure is to ensure a minimum impact of the activity on the environment.

Depending on their culture, their historical background, their overall legal and administrative context and their financial resources, different countries need to set up different types of permitting (licensing) procedures. But although the approaches may be different, they must all address the same questions: who should be required to have a permit; which government body should receive the permit application and which should ultimately issue and monitor the permit; what is the process by which a permit is decided upon; and what should be in a permit.

3.1 Permitting

Most laws contain licensing or permitting provisions for potentially polluting facilities. As all human activities are, in fact, potentially polluting, from a restaurant or garage, to a metal finishing plant or a chemical plant. Government has to set priorities using criteria to assess the importance of threats to public health or the environment such as industry sector, or type of activity, processes and chemicals used, size of the facility, location etc.

Depending upon the degree of potential threat to public health or the environment, two levels of licensing procedures have often been established:

- large and medium-sized companies, or other facilities with potential high environmental impact e.g. those handling hazardous or toxic materials.
- facilities with minor pollution discharges. These may not be required to obtain permits as their pollution levels are considered low. But they are generally required to notify the authorities of their activities.

The permitting authority may be at the national, regional or local level, reflecting the country's structure of government. In some countries the licensing authority may be the national Ministry of Environment, in others it may be at the provincial or municipal level, and in others it might be a specialized board, outside of the government. At any level, however, the permitting authorities need to be independent of political influences.

3.2 The permitting procedure

Based on the experiences from some countries, one can define essentially six steps in the permitting procedure:

(1) planning - when industrial developers should contact the appropriate authorities to explore the environmental implications of their project
(2) application submission
(3) examination of the application by the authorities and consultation with the public
(4) issuing the permit

(5) notification of the permit decision to the applicant
(6) publication of the permit

The permit should include the following elements:
- a description of the corporate environment policy;
- a general description of the plant a detailed map of the site and of the surroundings;
- a detailed description of the manufacturing process which will be used (in some cases, part of this information will be considered as confidential);
- the environmental impact assessment (EIA) which is the core of the application. It is on the basis of the content of the study that the measures to control emissions will be defined, and the emission levels set up.
- the risk assessment study;
- pollution prevention measures the company intends to take;
- the proposed emission levels
- hazardous waste treatment and disposal measures (including the name of the waste handling firm if the waste is treated outside the company);
- schedule of the implementation of the measures to be taken, in case of existing facilities;
- the emergency response plan in case of an eventual accident (per environmental sector in detail);
- future developments as a logical consequence of the application.
- proposed monitoring procedures to be used by the company, parameters to be monitored, frequency of analysis, methodology for monitoring a laboratory where the analyses have to be performed, book record keeping;
- reporting procedures (how and to which particular authority);
- the signature of the responsible officer;

Let me underline at this point one of the problems faced by developing countries authorities in checking EIA and risk assessment studies. Efforts are currently being made to transfer environmentally sound technologies. Schemes to provide decision-makers in developing countries with the necessary information are being set up such as the OzonAction Information Clearinghouse within the UNEP IE/PAC OzonAction programme and the International Cleaner Production Information Clearinghouse (ICPIC). Both are aimed at providing examples of currently available cleaner or CFC-free technologies, names of experts, list of organizations, and other sources of information.

Also, guidelines are being developed such as the OECD "Guiding Principles for Chemical Accident Prevention, Preparedness and Response", which are being reviewed in UNEP to broaden their scope to the whole world. But this is not enough; polluting technologies are being transferred between countries, resulting in polluting facilities. To avoid this, should not we promote a scheme for the export of technologies adopted from the Prior Informed Consent principles in the field of export of chemicals? This would help authorities in developing countries in issuing their permits and controlling their plant operations.

4 MONITORING COMPLIANCE

Once a permit is granted, it is essential that the government checks to make sure emission levels, hazardous waste disposal measures and other aspects of the permit are being complied with. Systematic inspection of industrial facilities is essential to ensure that the pollution limits stipulated in the permits are being complied with. If they are not, the government must then have the will and ability to take timely and appropriate steps best suited to its country (e.g. education, persuasion, fines, possibly jail) to see that its laws are enforced.

Verifying compliance involves systematic inspections to ensure that permit requirements are being met and that measures prescribed by authorities are being implemented. Integrated inspections, or at least coordinated inter-agency inspections, help to ensure that pollutants are not simply transferred between air, water and land. Inspections offer authorities an educational

opportunity to help companies develop integrated environmental management systems. The first inspection is usually unannounced to determine the willingness of the plant to comply. Once a plant has established good standing, advance notice of inspections might then be given to facilitate information gathering (in some countries, however, all inspections are unannounced, although companies in good standing may be inspected less frequently). Some degree of organizational independence from the government body issuing the permits is necessary to ensure unbiased and effective monitoring of compliance.

Overall tasks performed by an inspectorate differ from country to country but may include all or some of the following: advising companies on permit requirements, in some cases issuing the permit (although not by the same department which does the inspections), making inspections, follow-up to ensure that post-inspection requirements are met, keeping records, providing regulatory and technical information, involving the public in monitoring the performance of local facilities, promoting sound environmental management, taking and/or developing systematic enforcement actions when necessary.

5 CONCLUSIONS

At the Earth Summit, there was a consensus that environment should be seen as a production factor, not as a burden to the economy. As Dr Tolba, the Executive Director often underlines, development will not last unless it is built on firm ecological foundations. "Cleaner Production" is the key cornerstone in reconciling economy and ecology. "Cleaner Production" is the continuous application of an integrated preventative environmental strategy to processes and products so as to reduce the risks to humans and the environment. This approach brings financial gains resulting from the savings on raw materials and energy which end-of-pipe treatments do not.

Certainly, proper integrated control of industrial facilities is one of the tools to promote cleaner production through the use of better environmental management practices and cleaner techniques.

This is why we at UNEP believe that these efforts should be extended to all parts of the world, including developing countries. I congratulate US/EPA, the Commission of the European Communities and the Dutch Ministry of Housing, Physical Planning and Environment in organizing this conference for East and Central European countries and for enabling a few representatives from developing countries to also participate.

We hope that we can look forward to their support to UNEP in cooperating with developing countries to strengthen their institutional abilities to meet the needs of sustainable industrial development.

* "From Regulations to Industry Compliance", Technical Report Series N°11 (1992). Available from UNEPIE/PAC, Tour Mirabeau, 39-43 quai André Citroën, 75739 Paris Cedex 15, France. Fax (33-1) 40 58 88 74.

COMPLIANCE MONITORING IN NORWAY

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INTRODUCTION

This paper covers how the work of monitoring industry's compliance with environmental legislation is organized in Norway. Development in, methods used and results gained by, compliance monitoring are described.

1 THE STRUCTURE OF INSPECTION SERVICES - CENTRALIZED AND LOCAL ACTIVITIES

The monitoring of compliance with rules and regulations is carried out by the body that is given the authority to do so in the respective laws and regulations. The authority that grants the permit also exercises supervision and control to ensure that any conditions imposed in the permit are complied with.

In Norway this means that compliance monitoring in industry is centralized to one authority, SFT, which is also responsible for all reassessment/review of industry's self-monitoring activities.

The local county pollution control authorities are responsible for compliance monitoring in aquaculture, agriculture, sewage treatment, municipal land fills and so on.

The local municipalities are responsible for health and for land use.

In SFT the responsibility for environmental enforcement in industry is divided between two departments. The Department of Industry issues discharge permits to various industrial enterprises or companies. The Control Department is responsible for determining the industry's compliance with the terms of the permits. In 1992 a total of 22 persons are occupied with monitoring the industries compliance.

2 SFT'S PROGRAMME FOR MONITORING COMPLIANCE

In Norway 1500 enterprises have been granted discharge permits. The permits are usually multimedia, and cover water, air, noise, industrial waste and hazardous waste. This means that it is possible for the inspectors to monitor compliance on a multimedia basis during one and the same visit to the enterprise.

It is not adequate nor necessary to inspect all the 1500 enterprises at the same frequency or with equal thoroughness. In order to get the best possible effect from our limited inspection capacity, enterprises that have been granted permits are divided into four control classes.

The classification is based on the potential emissions from the enterprise and their toxicity. The environmental sensitivity (air and water quality) of the surroundings are also taken into account.

The most polluting enterprises are placed in class 1, which includes 50-60 enterprises/ plants (e.g. chemical industry, pulp and paper industry, aluminium industry, ferro alloy industry, large foundries, off-shore oil installations). Small enterprises producing only a limited amount of pollution are placed in class 4 (e.g. small dairies, slaughterhouses and small asphalt plants).

SFT monitors compliance by means of :

* reports submitted by the enterprises
* inspections
* environmental auditing
* source testing

A schedule for compliance monitoring for the enterprises depending on control class has been worked out. This is outlined schematically in Table 1.

Table 1 Schedule for compliance monitoring in facilities with discharge permit

Class	No. of facilities	Reports to SFT	Inspections frequency (minimum)	Audit frequency source testing (minimum)
1	50	once or twice a year	annually	once every 3 years
2	100	once or twice a year	once every 2nd year	once every 6 years
3	350	once a year	once every 2nd - 3rd year	depending of type of discharge
4	1000		depending of type of discharge and complaints	
TOTAL	1500			

3 COMPLIANCE MONITORING

3.1 Self-monitoring

In the case of large enterprises (classes 1 and 2) the permit includes a requirement to establish and maintain a well defined self-monitoring programme. Smaller enterprises (classes 3 and 4) are usually required to have a less comprehensive self-monitoring programme.

A self-monitoring programme will usually contain :

* a source testing programme
* record keeping
* written procedures for important activities that can effect the discharges
* routines for submitting reports to the authorities

All major enterprises also have to submit a report on emissions to SFT, usually once or twice a year. This provides information on emissions from the enterprise (seen in relation to the requirements and emission limits) and on waste. This self-monitoring is indeed the backbone of the programme to monitor compliance and the reports are used to help to set priorities for the inspection programme.

During 1992 SFT will examine and revise the self-reporting system. The reports submitted by enterprises are to be standardized in order to simplify processing and use.

In case of violation the report is to include a description of the corrective action taken to avoid recurrence.

From 1. January 1992, all enterprises have to meet the requirements in a new regulation concerning internal control.

This regulation places an increased emphasis on the responsibility of the enterprise/ company management for controlling pollution.

3.2 Inspections

Inspections are unannounced and last for 3-8 hours in the field.
The total workload per inspection is 3 - 5 days.

The objectives of an inspection are :

* To check whether the enterprise is in compliance or not
* To collect evidence in the case of non-compliance, to ensure the necessary enforcement action.
* To ensure high quality of the self-reported data
* To demonstrate that the authorities take compliance seriously

Inspections may focus on one or more of the following :

* Does the enterprise have a valid discharge permit ?
* Has the required pollution monitoring or control equipment been installed ?
* Is the equipment being operated correctly ?
* Are records of self-reported data properly prepared and maintained ?
* Is the enterprise conducting the required sampling and analysis properly ?
* Does the enterprise management plans and practice support the required compliance activities ?
* Are there any signs of willful violation of regulations and/or tampering with data ?

A written report is always sent to the enterprise following an inspection. The inspector presents findings from the inspection supported by, monitor readings, copies of files, photographs and other material of importance for enforcing the regulation. Any collected samples are sent to an approved laboratory for analysis.

The Control Department carries out 300-400 inspections annually.

3.3 Environmental auditing and source testing

Until 1988 compliance was monitored only through the reports submitted by the enterprises and through inspections.

It was then decided that a more thorough inspection was needed for enterprises in control classes 1 and 2. The first year these inspections had the form of emission source testing only, but already in 1989 SFT started to include an element of auditing.
The extent of environmental auditing has since increased gradually. In 1992 all the thorough inspections contain elements of auditing.

Source testing is still used to a large extent, but mainly to verify findings in connection with the audit.

Through inspections and reports submitted by the enterprises we have learned that the continuous discharges and the most elementary problems in pollution control are reduced. But violations often occur in connection with accidents, irregular production, or poor maintenance.

By performing audits SFT does not only monitor whether the facility is in compliance, we also often find the reason for non-compliance. Often non-compliance is caused by inadequate management and the lack of control systems.

Auditing also gives us a possibility to underline the managements responsibility towards better housekeeping. A follow up of the audit from authorities is quite often a demand for better preventive actions and systems.

The main parts of an audit cover:

* interviews with personnel at all levels of the enterprise (from management to operators on the production floor)
* reviewing files and documents
* verifying that procedures are followed, e.g. by source testing, reviewing records and watching operations.

These inspections are usually carried out by 2 or 3 inspectors who stay in the field/at the enterprise for 4-5 days. The total time involved in an audit varies from 3 to 7 weeks.

In 1991, 39 audits were carried out by SFT. The number will be increased to 50 in 1992.

4 FUNDING

SFT's control activities are financed by fees (imposed since 1986), based on the principle that the pollutor must pay. In 1992 the fees were as follows :

Table 2 Fees

Control class	Per inspection	Per source test/ environmental audit 1)
	US Dollar	US Dollar
1	2,200	23,700/15,000
2	1,600	15,000/ 9,000
3	1,200	5,000
4	500	

5 RESULTS

In one third of the unannounced inspections compliance is found. For the remaining two thirds, more or less severe violations are found. Approximately 10% of the inspected enterprises have what we consider serious violations. These percentages have been relatively constant throughout the years, but the cause for violation have changed.

The development in types of violations from 1987 till 1991 is given in the following table.

Table 3 Violations revealed during unannounced inspections (in %)

Violation	1987	1988	1989	1990	1991
Exceeding production limits	11	6	6	3	9
Acute Pollution	1	4	2	4	7
Defective or insufficient technical equipment	22	13	13	9	17
Insufficient maintenance	5	10	7	7	11
Insufficient self-monitoring	22	21	21	27	29
Exceeding discharge limits	22	26	21	20	22
Insufficient/illegal handling of waste or chemicals	13	11	18	19	24

From 1987 till 1991 we inspected mainly enterprises in control classes 1, 2 and 3, and an improvement with regard to technical equipment was found. There are also fewer cases of violation of production limits.

The increase in number of violations concerning the handling of waste and chemicals are probably due to intensified control in this field. Increased attention and a demand for better quality from the authorities explains the development with regard to self-monitoring.

During 1991 we carried out an inspection campaign for enterprises in control class 4. The inspected enterprises had seldom or never been inspected before. The results are suggestive. The causes for violation are mainly the same as for enterprises in the higher control classes several years ago.

This campaign is the reason for the increase in violations uncovered due to exceeding production limits and insufficient/defective technical equipment found in the reports from 1991.

The results from the campaign clearly demonstrated : Inspection is necessary in order to gain compliance.

The results from the audits carried out in 1991 are given in table 4.

Table 4 Violations and observations revealed during audits in 1991

	Number of enterprises with	
Cause	**violations**	**observations**
Insufficient control/ management system	**26**	**35**
Insufficient system for self-monitoring	**21**	**21**
Exceeding discharge limit	**15**	**3**
Insufficient reports to SFT	**13**	**4**
Insufficient/illegal handling of waste/chemicals	**8**	**8**
Insufficient prevention against accidents	**7**	**13**
Defect or lack of technical equipment	**4**	**3**
Total number of audits: 39		

Findings from an audit are reported either as violations or as observations. Findings which can not be considered as non-compliance, but where SFT finds it necessary to point out a possibility for improvement are defined as observations.

The pattern of violations are to a great extent the same for audits as for the unannounced inspections.

The audits, however, give us a better possibility to reveal non-compliance and possibility/ need for improvement in the control/management system.

US EXPERIENCE AND DIFFERENCES BETWEEN CIVIL AND CRIMINAL INVESTIGATIONS AND USE OF CENTRAL ELITE FORCE TO SUPPLEMENT LOCAL INSPECTORS

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SUMMARY

The United States' environmental enforcement program relies on well trained technical field inspectors at the Federal, State, and local levels. Field inspectors perform a variety of compliance inspections and investigations[1*] to identify civil and criminal violations of the environmental laws and to support resulting litigation. At the Federal level, the decentralized inspection force is supplemented with a central elite inspector corps located at the National Enforcement Investigations Center in Denver, Colorado. This paper briefly summarizes the U.S. experience in environmental inspections, discusses the unique features of providing technical support to civil vs. criminal investigations and the role of a central elite corps to supplement Regional inspectors and identifies inspector training activities within the U.S. Environmental Protection Agency.

1 INTRODUCTION

The Environmental Protection Agency (EPA) was established in December 1970 and consists of ten Regional Offices located throughout the United States. Each Regional Office has a broad range of responsibilities in carrying out Congressional mandates for environmental protection by the vigorous enforcement of Federal environmental laws and regulations. These Regional Offices are supported by an EPA headquarters infrastructure consisting of program offices which provide policy guidance. Figure 1 shows the EPA organizational structure including the relationship between EPA headquarters and the ten Regional Offices.

Since its beginning, EPA's enforcement authorities have increased steadily, both through strong enforcement provisions in newer environmental legislation and amendments that provide greater enforcement powers under the older laws. EPA and the States, under programs delegated or approved by EPA, carry out comprehensive programs to promote high levels of compliance by conducting compliance monitoring activities (including inspections) to detect violations. Firm, but fair, enforcement action may be taken against violators to correct violations and create a strong enforcement presence.

Personnel conducting compliance inspections and field investigations play an essential and key role in the success of the national enforcement programs. The vast majority of compliance inspections and field investigations are conducted by a well trained and decentralized field inspector cadre from either the ten EPA Regional Offices or from State and local organizations. Most inspections are conducted at the State level (1).

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[*] The terms "inspections" and "investigations" are comparable except that investigations involve broader issues than inspections and typically require more in-depth evaluations of facility and operating procedures.

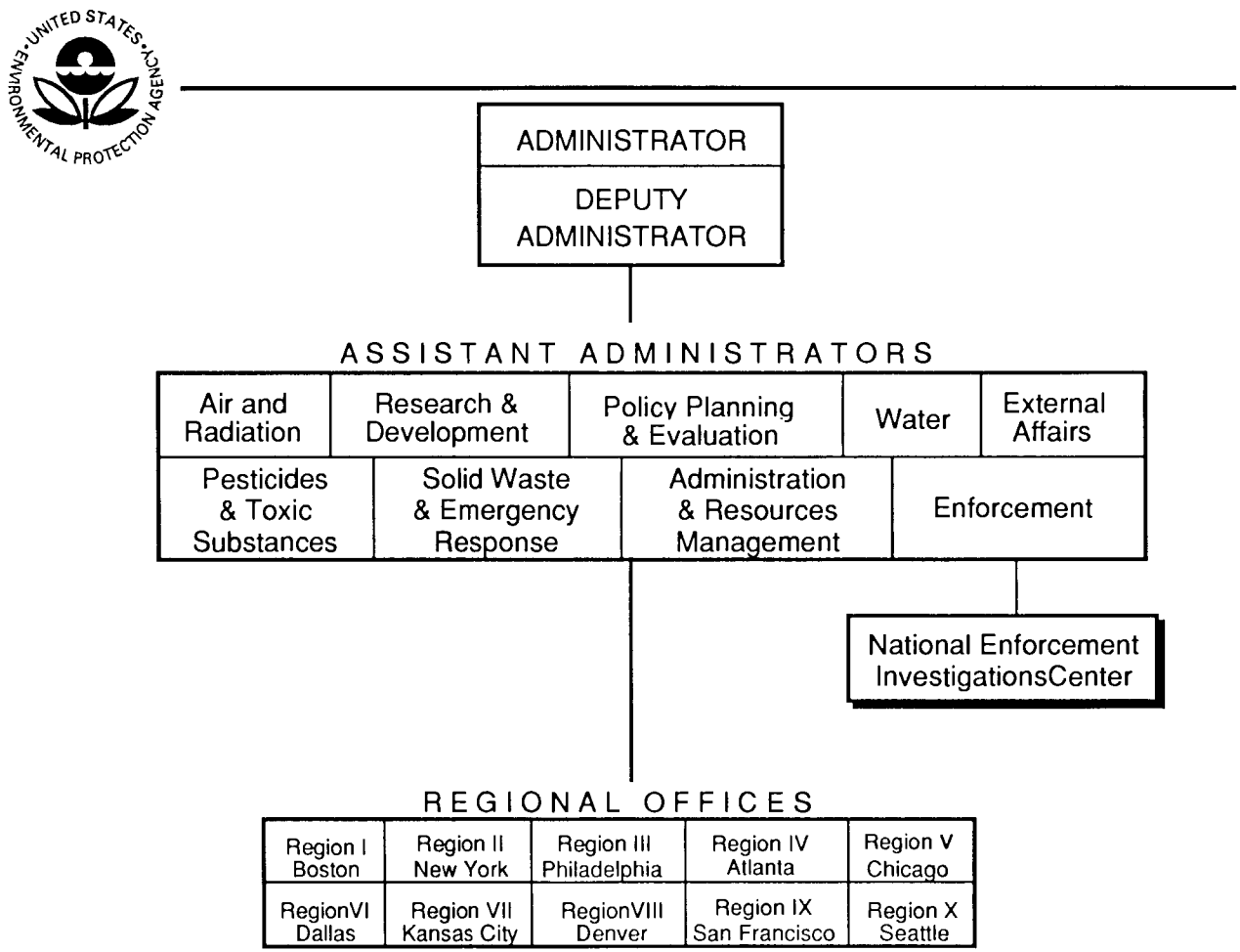

Figure 1 - EPA Organizational Chart

The decentralized field inspector capability is supplemented by a central elite inspector corps organizationally situated in the EPA Office of Enforcement and physically located at the National Enforcement Investigations Center (NEIC) in Denver, Colorado. The organization of the Office of Enforcement is shown in Figure 2. The NEIC supports the Agency by conducting special investigations for both the civil and criminal programs.

2 COMPLIANCE ACTIVITIES

2.1 Field Inspection Program

The field inspection program within the environmental program is conducted by environmental inspectors who are located throughout the governmental environmental community at the Federal, State, and local level. Within the Environmental Protection Agency, there are approximately 1850 personnel performing compliance inspections. Of these, about one sixth are new and about five sixths are experienced (2); however, even the experienced Federal inspectors have relatively limited experience with an average of only about two years on the job. In contrast, NEIC technical inspectors average approximately 15 years experience.

Inspectors have a variety of backgrounds. The majority of EPA inspectors are scientists or engineers (1)(3). State inspectors have been observed to have approximately the same backgrounds as the EPA inspectors.

There are extensive demands on the environmental inspectors' time with a minimum number of mandatory inspections required each year as well as the need to inspect targeted facilities. Approximately 250,000 inspections are conducted annually. The States conduct approximately 85 percent of all inspections, EPA conducts about six percent, and contractors conduct the remainder (1)(4). In addition to conducting the inspections, the inspector must also develop information and devote the time necessary to support any subsequent enforcement action.

Inspections and subsequent case preparation frequently require a team approach. Analytical support from either a government or contract laboratory is often needed. Each EPA Region[2**], most States, and NEIC have laboratories which support the field work. In addition, many Regions and States rely on contract laboratories to handle analytical work loads in excess of government laboratory capacity. Legal staff, information specialists, financial analysts, etc., are also necessary to support the field inspector during all phases of the inspection. The support team will provide legal guidance and information on processes, compliance status, products, ability to pay, etc.

The States shouldered a significant share of the nation's environmental enforcement workload; in FY 1991, over 10,000 civil judicial and administrative actions were taken by States. At the Federal level, in FY 1991 there were over 1600 civil judicial and administrative cases reflecting action under twelve environmental programs (5).

Only a relatively small number of Federal inspectors, estimated at 25 percent, perform 80 percent of the inspections; the rest of the inspector's time is taken up by various program activities (1). Furthermore, the vast majority of EPA inspectors specialize in only one program area (e.g., air, water, hazardous waste) and are not cross-trained in multiple programs. The demands on the Regional inspector's time frequently prevent the inspector from spending the time necessary to learn and conduct the more thorough complex multi-media investigations. As the trend continues towards multi-media investigation and the holistic approach it offers, however, the demand will increase for more inspectors with multiple program training and experience. As of late 1990, nearly all of NEIC inspectors, but only approximately 15 percent of the Regional inspectors, had training with a multi-media perspective (6). Information on the status of multi-media inspectors at the State level is not readily available.

** Region 9 laboratory is currently under construction.

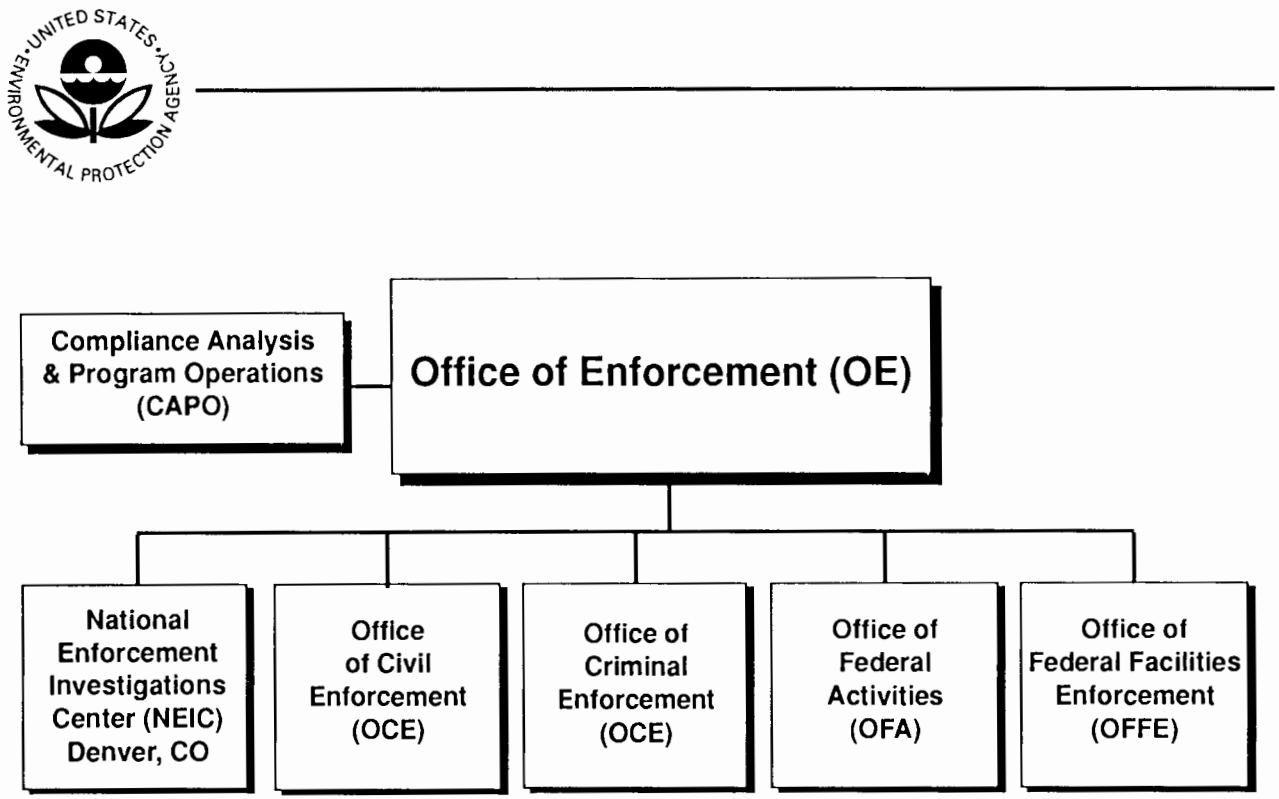

Figure 2 - OE Organizational Chart

Environmental compliance inspections and the multi-media approach have evolved over the years. Prior to the late seventies, each inspection was program specific and concentrated on determining compliance with only one environmental law or one aspect of an environmental law (e.g., an inspection to determine compliance with the waste discharge permit requirements of the Federal Clean Water Act). By the end of the seventies, NEIC had determined that it was much more effective and efficient to combine inspection objectives to include more than one environmental law, and thus developed the procedures for "multi-media" inspections. The multi-media approach, which has been strongly endorsed by EPA management (5), was determined to have several advantages over a program-specific inspection including:

- A more comprehensive or holistic and reliable assessment of a facility's compliance status with fewer missed violations
- Better assurance that pollution is not transferred from one medium to another
- A higher probability to uncover/prevent problems before they occur or before they manifest an environmental or public health risk
- Ability to respond more effectively to non-program specific complaints, issues, or needs and develop a better understanding of cross-media problems and issues, such as waste minimization, pollution prevention, and control of toxic materials
- Better focus senior management in the regulated community on the broad range of environmental compliance issues, better ensuring that they do not overlook significant environmental problems
- Better potential for enforcement

2.2 Criminal Enforcement Program

Concomitant with the development of the multi-media approach, the EPA recognized the need to be more vigorous in its pursuit of criminal sanctions for violations of environmental laws. On January 5, 1981, the Deputy Administrator directed the creation of the Office of Criminal Investigations in Washington, D.C., and the hiring of a trained investigative staff. Also in January, 1981, the Attorney General of the United States confirmed the authority of EPA to initiate, or assist in, investigations into potential violations of the criminal provisions of the environmental statutes that the Agency administers. Among the program's responsibilities were supervision of all Regional criminal case development and referrals, development of Agency-wide training and policy, coordination of the Agency's joint investigative program with the Federal Bureau of Investigation (FBI), and liaison with the Department of Justice (DOJ) and outside law enforcement agencies.

The criminal enforcement program hired an in-house staff of 23 experienced criminal investigators which had expanded to over 70 by 1992. Most of the agents were formerly with such law enforcement agencies as the FBI; Drug Enforcement Administration; Bureau of Alcohol, Tobacco and Firearms; or the Internal Revenue Service. The agents were deputized by DOJ as Special Deputy United States Marshals, giving them full law enforcement authority to execute search warrants, make arrests, and carry firearms.

The Pollution Prosecution Act of 1990 recognized the benefits of the criminal investigation program and the need to expand the number of criminal investigators up to 200 by Fiscal Year 1995. The current number of investigators is inadequate for several reasons. The Congress has placed an increased emphasis on criminal enforcement by upgrading many offenses from misdemeanors to felonies. Additionally, as public awareness of environmental crimes has increased, the public has become more willing to provide "tips" concerning environmental crimes which have substantially increased the workload of the investigators. States are now requesting help in developing their own criminal investigation programs which also puts a growing demand on the Agency's criminal investigators. Finally, the current number of criminal investigators forces the Agency to use its prosecutorial discretion in many cases and develop a civil case rather than an enforcement case (7).

2.3 Civil Investigation Program

Inspections/investigations are continuing to evolve with the addition of civil investigators to the inspection arsenal. The Pollution Prosecution Act of 1990 authorized 50 civil investigators by recognizing that the Agency's technical inspector/investigator corps would benefit from the addition of a expertise presently not readily available to the media programs. Civil investigators have received in-depth training and have specific skills and abilities in the areas of interviewing and records evaluation which enable them to assist technical and legal staff by locating corporate and personnel assets, determining corporate structures and ownership, locating witnesses, etc.

The NEIC is piloting the civil investigator program to develop and demonstrate the contributions that civil investigators can make to Agency enforcement programs and to define potential roles of civil investigators in multi-media investigations. This information will be used as a basis for Office of Enforcement policy decisions concerning full implementation of the civil investigator provisions of the Pollution Prosecution Act.

2.4 Technical Support

From a technical standpoint there is a high degree of similarity between civil and criminal cases although more stringent procedural aspects are followed in the development of criminal cases. Substantially more interaction is also required between prosecutors, investigators, and technical personnel in the development of a criminal case. The technical personnel supporting a criminal case must fully understand precisely what the criminal investigators and the prosecutors need to support the case. Furthermore, and perhaps even more important, the technical personnel must fully understand all legal constraints surrounding the criminal investigation and must rely heavily on the prosecutor and criminal investigator for guidance.

While the States conduct most of the civil investigations, most of the technical support for the criminal enforcement program comes from EPA inspectors and from the NEIC[3***]. Generally, technical support for case development can be broken down into six different areas which are discussed below,with civil/criminal technical support contrasted:

2.4.1 Development of background information

A civil investigation will include extensive background research and may often expand the background research to obtain detailed information about process operations. The investigator on a civil investigation is interested in developing an in-depth technical understanding of facility operations to enable the investigator to better identify areas where a facility operator may have unknowingly failed to identify or properly handle waste streams. The criminal investigator is looking for willful violations.

During this phase of a criminal investigation, NEIC assists by providing financial, regulatory, and historical information on the target industry or individual. This is accomplished by accessing the extensive computer data systems available through NEIC Information Services. Research may also be done on the target facility's manufacturing processes to determine the probable waste streams the industry is likely to generate and under which specific Federal statutes these wastes are regulated. When necessary, covert samples are collected from the target facility to provide additional support for probable cause of a criminal search warrant. The civil investigator rarely has a need for covert sampling, as entry is usually consensual.

*** NEIC piloted the criminal investigation program during the 1980's and, in cooperation with the criminal investigators, developed the procedures for providing technical support to the agents during the conduct of a criminal investigation.

2.4.2 Preparation of an investigative plan

No matter how large or small the investigation, up front planning is necessary to assure success and the accomplishment of objectives. Generally, a written investigation plan is desirable. For large scale investigations and for investigations involving more than one organizational element (e.g., criminal investigation), a formal written plan is almost essential. A written plan serves two purposes: (a) it assures that all investigation team members know the needed investigation activities, required standard operating procedures and protocols, unique procedures, and team member responsibilities; and (b) it provides all interested parties with a clear understanding of the extent of the technical support to be provided.

2.4.3 On-site field investigations

The technical investigator is responsible for the collection, documentation, and maintaining chain-of-custody of physical evidence. All aspects of these activities are done in a manner which at some future time are fully defensible and accountable in the Federal court system. Although civil cases require documentation, it is usually not to the extent of a criminal case. Additionally, entry under civil authorities is usually consensual while site entry under a criminal case is usually with a warrant.

The technical conduct of the investigation is also different between a criminal and a civil case. During a criminal investigation, the investigators are limited in what can be sampled or evaluated to that which is precisely listed in the criminal search warrant. Furthermore, on-site investigations under a criminal search warrant are usually limited to a specific number of days (typically ten days). During a civil investigation, the investigator has substantially more latitude to sample or evaluate anything they desire within the very broad guidance of the environmental laws and the only limitation on time is the availability of the investigator.

Prior to 1990, most criminal cases were media specific (8); however, consistent with the Agency's emphasis on multi-media enforcement, by FY 1991 the criminal enforcement program also emphasized the multi-media approach (5).

2.4.4 Analytical support

Ideally, a laboratory representative will assist in determining the analytical needs of the investigative activity. On a civil investigation, samples may be analyzed at a Regional or State laboratory, the NEIC laboratory, or a non-government contract laboratory. Most samples collected in support of criminal investigations are analyzed by EPA laboratories. Approximately 40 percent of the samples collected for a criminal case are analyzed at the NEIC laboratory, which is the Agency's primary forensic laboratory. The Regional laboratories analyze another 40 percent and State and local laboratories analyze the remaining 20 percent.

2.4.5 Preparation of a technical report

Perhaps the most obvious difference between technical support in civil and criminal cases is evidenced in the technical reports. A technical report for a criminal case contains only the specific facts observed during the investigation and the specific results of the analytical work. The report contains no conclusions or interpretations. On the other hand, a civil report contains extensive information about the background of a facility, the process operations, discussions between the investigator and employees, and the conclusions and interpretations resulting from the investigation. Neither the civil nor criminal report will not identify areas of noncompliance, however, such observations may be made in separate correspondence.

2.4.6 Case preparation and litigation support

During this time period critical review is done of all data and known facts relating to the investigation. Technical personnel work closely with the case agent and the assistant U.S. attorney aiding in the interpretation of sample data and determination of how the information supports witness and informant testimony. Decisions are made at this time, supported by witness testimony and physical evidence, as to which specific Federal regulations have been violated. This information is then used for the preparation of a Federal indictment. Once the case is brought to trial, all personnel involved in the investigation must be prepared to testify in court as government factual or expert witnesses. All documents, records, and evidence are preserved throughout the case preparation and litigation phases of the enforcement activity. This procedure is very similar in both civil and criminal cases.

For a specific investigation, each time period is variable and the activity required to achieve each of the four segments of the investigation can vary from days to six months or more. It should be recognized that, on the average, a successful environmental criminal investigation will take approximately 18 months; a successful civil case may take more time.

3 CENTRALIZED INVESTIGATIVE TEAM

For the last twenty years, EPA and other Federal and State organizations have been aided in the enforcement of environmental laws by a centralized investigatory center known as the National Enforcement Investigations Center (NEIC) located in Denver, Colorado. Founded in 1970, the NEIC was originally known as the National Field Investigations Center-Denver. It was an operations unit of the enforcement program of the Federal Water Quality Administration in the U.S. Department of Interior. The early responsibility of the Center was to perform water pollution studies for administrative enforcement actions and public hearings under the Clean Water Act. In December 1970, the Center was transferred to the newly established EPA and began reporting to the Office of Enforcement and General Counsel (now Office of Enforcement) at EPA Headquarters. In July 1975, the Center became the National Enforcement Investigations Center, with responsibility for conducting pollution investigations and preparing administrative, civil, and criminal enforcement cases under all Federal environmental laws.

NEIC serves as a principal source of expertise involving civil and criminal litigation support for complex investigations having national and/or significant Regional impact on EPA and State regulatory programs for air, water, toxics, pesticides, radiation, and solid waste pollution control. The major function of the NEIC is to gather evidence and provide information for case preparations in support of EPA enforcement actions. This includes litigation support for complex investigations in all environmental programs. The Center's investigative teams normally become involved in situations where large scale investigations exceed the resources of the Regional Offices or where special technical expertise or investigative skills are required. Whereas Regional and State level investigations are usually conducted with only a limited number of personnel over a one or two day period, investigations conducted by the NEIC typically include more people over an extended period of time. Five to 30 or more technical staff may be involved in an NEIC level investigation, and time on-site usually takes one to two weeks with some investigations requiring several months.

The NEIC's case preparation activities are unique in that these investigations are performed full-time in contrast to Regional Offices who have other ancillary responsibilities. As a result of this full-time commitment, probably more litigation experience exists at the Center than at the Regional Offices combined. Emphasis is placed on NEIC's quick response, which often includes short notice field investigations of activity such as waste dumping or emissions that potentially endanger public health or welfare.

The Center has about 120 employees, of which approximately 35 are highly skilled, senior level, investigators with extensive experience in conducting field investigations. In addition, about 90 contractor employees perform a variety of services related to the Center's function. The professional disciplines of the Center's employees include civil, sanitary, environmental, chemical and industrial engineers; civil investigators; biologists; microbiologists; geologists; hydrologists; information management specialists; physicists; and chemists. An attorney staff provides litigation support to EPA and/or the United States Department of Justice in prosecuting environmental offenders in formal regulatory or judicial proceedings resulting from NEIC investigations.

NEIC is a nationally-managed source for investigative, technical, scientific, administrative, and information management support that is necessary to the preparation of almost every significant environmental case. The Center is frequently called upon by other Federal and State agencies to provide expert advice, consultation, and assistance for pollution control and remedial actions and may also support other Federal or State actions by conducting overflow chemical analyses. The Center has had extensive experience in the development of environmental investigatory techniques and has gained national and international recognition through participation in many of the Agency's most important civil and criminal enforcement cases. As noted earlier, NEIC has been the lead in developing new compliance monitoring approaches and has developed the multi-media investigation techniques and strategies. One of the Center's most recent initiatives is the development and piloting of the new Civil Investigator program.

More specifically, the Center's primary responsibilities include:

- Conducting thorough, multi-media investigations of the most complex facilities nationwide using the special expertise developed in conducting complex multi-media investigations
- Assuring the adequacy and validity of scientific and technical evidence, including data collection and analyses, and review and development of analytical techniques, methodologies, and computer information systems
- Providing training and specialized technical assistance to EPA Headquarters and Regional Offices in support of criminal investigations
- Providing expert testimony on a wide variety of specialized subjects in support of enforcement actions
- Providing expertise and guidance to the Office of Enforcement for the development of multi-media enforcement strategies and evidence management
- Providing national expertise to Headquarters and Regional Offices of EPA and the Department of Justice in evaluating a broad range of waste disposal and emission problems, and monitoring technology and remedial programs not normally available on Regional staffs
- Developing the emerging Civil Investigator program and providing technical support to that program

Cases are referred to NEIC by the Office of Enforcement at EPA Headquarters, Regions, or the DOJ (including the FBI). Cases are usually referred to NEIC in writing after preliminary discussions between NEIC and the requestor; however, in emergency situations requiring quick response, a telephone call may be all that is required. By the time a case is referred to NEIC for investigation, it has already been through a number of preliminary steps. Regional Office case screening procedures assist in identifying potential enforcement cases for NEIC support. If a State or EPA Region is aware that a serious environmental problem exists and has concluded that there is no likely resolution short of enforcement action, the situation is already fairly complex. An investigation is usually required, questions of motivation arise, and identification of other potentially responsible parties and environmental impacts must be considered.

The NEIC works very closely with the referring organization in responding to a case preparation request. To accomplish efficient case development and management, core

teams are established for the purpose of close and continuous communications among the investigative participants throughout the entire case development process.

The core team normally consists of representatives within the investigative, technical, and legal fields, including appropriate representation from the United States Attorneys' Office or the Department of Justice. The initial functions of the core team are to discuss the statutory and regulatory provisions suspected to have been violated and to determine what evidence must be obtained to ascertain whether the violations have occurred. If criminal activity is suspected, the core team will include NEIC staff who have received special training in the conduct of criminal investigations as well as appropriate representatives from EPA's Office of Criminal Enforcement and/or the FBI. Given the areas of expertise represented, the core team has the ability to minimize potential problems before they arise during an investigation. For example, decisions can be made and modified as necessary regarding sampling and testing, including what should be sampled, how many samples should be taken, and what analyses should be performed. NEIC case investigations include activities identified in the section Technical Support. To assist in understanding the general scenario in the use of a centralized team to supplement decentralized inspection capabilities, several case studies are presented:

One example where the resources and expertise of the centralized NEIC were required was the National Hazardous Waste Ground-Water Task Force initiative. This national Task Force was formed as a result of concerns over whether hazardous waste treatment, storage, and disposal facilities were complying with the ground-water monitoring requirements issued under the Resource Conservation and Recovery Act (RCRA). Prior to the mid 1980's, the purity and safety of ground-water was taken for granted. That assumption was shaken when preliminary EPA studies found that many facilities had not complied with the ground-water monitoring requirements of RCRA and thus did not know if contaminants were entering and contaminating the ground-water. The massive goal of the Task Force was to perform a comprehensive evaluation of all commercial hazardous waste treatment, storage, and disposal facilities nationwide to determine (a) whether or not the facilities were in compliance with the regulations and (b) whether or not contaminants were entering the ground-water.

The Task Force, national in scope and transcending Regional boundaries,required expertise in conducting large scale technical investigations and an extensive resource commitment. The centralized elite force already in existence immediately filled the need. NEIC's role in the Task Force was to develop and implement field protocols and procedures to assure a nationally consistent approach to identifying ground-water monitoring compliance problems. This role could not have been assumed by any single region.

NEIC initially provided training for the Regions and States (and contractors who assisted in the sample collection) involved on the Task Force on proper procedures for evidence collection and handling, including the handling of confidential business information. To establish consistency nationwide, and to provide "on the job" training to each Region and involved State, NEIC led the investigation at the first facility investigated by the Task Force in each of the ten Regions.

Although contract laboratories were used extensively during the Task Force activities, the NEIC laboratory personnel provided expertise to the Task Force in evaluating facility laboratories. The purpose of the laboratory evaluation was to determine if the laboratory had the appropriate personnel and equipment to perform the required analysis and to determine if the facility laboratory was following the correct procedures. This expertise is not normally found in the Regions. Additionally, the NEIC laboratory provided a duplicate analysis of select samples from each NEIC lead investigation to confirm that data from the contract laboratories met EPA quality requirements.

In keeping with the Center's mission of gathering evidence and providing information for case preparation, NEIC approached each Task Force investigation as an enforcement case. As a result, most NEIC Task Force investigations resulted in follow-up

enforcement action. One investigation ultimately developed into a criminal case which culminated in an 18.5 million dollar criminal penalty, the second largest to date.

Another example where the centralized team approach was necessary involved an on-going investigation of the Department of Defense (DOD) and their contractors charged with the disposal of DOD generated hazardous wastes nationwide. NEIC was initially requested to evaluate contractor performance and compliance in the disposal of the wastes. NEIC expanded the evaluation to include multi-media issues involving DOD generation and handling of wastes through contractor transportation and ultimate disposal (i.e., cradle-to-grave). Wastes were tracked from generation in one Region to disposal in another Region, frequently passing through multiple Regions. This national effort, like the Hazardous Waste Ground-Water Task Force, could not have been assumed by a single Region. The centralized approach identified patterns of conduct and the need for substantial changes to the way DOD disposed of hazardous wastes. As a result of this national effort, approximately 40 DOD installations and over 100 contractors were evaluated; almost 400 environmental violations were found. Both civil and criminal actions were taken in response to almost all violations, and approximately ten percent of the contractors were ultimately determined to be ineligible to receive further contracts.

NEIC resources have also been used for protocol development and piloting of new Agency initiatives or regulations, implementation of Agency strategies such as company-wide investigations of multi-regional companies, and training. Some specific recent examples of NEIC's projects include investigations of the United States' two largest multi-regional hazardous waste disposal companies, implementation of the toxics in air initiative (in response to the new Clean Air Act Amendments), development and implementation of protocols for enforcing the RCRA Land Ban restrictions, and implementation of multi-media investigations at Federal Facilities. All of these examples demonstrate the efficiency and cost effectiveness of utilizing a centralized elite force with broad ranges of expertise and experience to implement large scale inspections and investigations to determine environmental compliance.

4 TRAINING

Achieving and maintaining a high level of compliance with environmental laws and regulations is one of the most important goals of the EPA. Personnel conducting compliance inspections and field investigations play a key role in the success of the national enforcement programs. Given the relative inexperience of inspectors, the increasingly complex laws and regulations being enforced, and the need for national consistency in the way the laws and regulations were being enforced, a need for a systematic, agency-wide, compliance inspector training program was identified. In June 1988, the Administrator of the EPA issued a policy entitled "Agency-wide Program to Train, Develop and Recognize Compliance Inspectors and Field Investigators". EPA Order 3500.1 was adopted. This order required basic and program-minimum inspector training. EPA's compliance programs developed program-specific curricula, combining self-study, classes, and on-the-job training; total training hours vary for each program and range upward from approximately 150 hours (including on-the-job training), depending upon the complexity of the program (9). The Office of Enforcement designed the basic inspector course, "The Fundamentals of Environmental Compliance Inspections". This basic course is required of all inspectors regardless of program assignment. The Inspector Training Advisory Board, composed of Regional and Headquarters compliance program managers and led by the Office of Enforcement, oversees implementation of the program. The primary goal of this program is to foster quality compliance inspections and field investigations as critical components of the EPA's compliance monitoring and enforcement functions. The training identified under this program is required of all EPA inspectors and investigators.

As noted earlier, State and local personnel conduct the majority of environmental compliance inspections and investigations under delegated or approved programs. While the EPA cannot require that State and local personnel take part in this training program, EPA is working with these agencies to encourage State and local training programs to identify and meet training needs for their compliance inspectors/field investigators. These agencies are welcome and encouraged to use all relevant Agency training materials and to participate wherever possible in the training opportunities offered by EPA.

One of the most fruitful EPA initiatives to build stronger environmental enforcement programs at the State and local level has been the establishment of four regional environmental projects, that is, the Northeast Environmental Enforcement Project, the Midwest Environmental Enforcement Association, the Southern Environmental Enforcement Network, and the Western States Hazardous Waste Project, funded by the Office of Enforcement. The training programs provided by these State organizations provide training to the regulatory, investigative, and prosecutorial components of State and local governments. In FY 1990, these organizations offered a dozen courses and trained over 500 State, local, and Federal members of the enforcement team.

On November 16, 1990, the President signed the "Pollution Prosecution Act of 1990" which mandated the establishment of the National Enforcement Training Institute (NETI) within EPA's Office of Enforcement. EPA Administrator Reilly formally established NETI on November 8, 1991. The primary function of NETI is to train Federal, State, and local lawyers, inspectors, civil and criminal investigators, and technical experts in the enforcement of the Nation's environmental laws. To carry out this function, NETI personnel, with the assistance of other EPA, Federal, State and local personnel, are developing core curricula for all categories of enforcement personnel; providing basic enforcement training with a multi-disciplinary, multi-media perspective; developing and delivering generic enforcement skills training; and coordinating with all EPA program offices in the development and delivery of enforcement specific training.

To assist in the delivery of courses, two NETI training facilities will be established: NETI-West in Denver, Colorado, and NETI-East in the Washington, DC, area. NETI-West began operations in July 1992, with a small management staff provided by NEIC and faculty provided by NEIC, other EPA Offices, and various other agencies. The training facilities will reach far into providing the needed knowledge, skills, and abilities to promote team approaches to environmental enforcement.

5 CONCLUSIONS

A centralized investigative center has proven, through over twenty years of experience, to be an invaluable supplement to Regional inspectors in enforcement case preparations. In cases where large scale, complex investigations may exceed Regional resources or require specific expertise not normally available in Regional Offices, a centralized team can provide the personnel and resources for quick responses and detailed case preparation activities. This is particularly true in the conduct of multi-media compliance investigations for enforcement purposes. When an enforcement team is available to conduct case preparation on a routine basis, the necessary procedures and legal safeguards are in place to effectively and efficiently carry out Agency regulatory responsibilities. This type of centralized team would be useful at all levels of environmental enforcement, including State and local governments,

The centralized team has proven to be particularly useful with the increased emphasis on the use of criminal enforcement authority contained in the environmental statutes; many of the criminal cases investigated involve multiple environmental laws. The cross-training of team members has provided an excellent mechanism to achieve the Agency's multi-media objectives.

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UK EXPERIENCE IN ESTABLISHING AN INSPECTORATE FOR INTEGRATED POLLUTION REGULATION

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SUMMARY

Her Majesty's Inspectorate of Pollution (HMIP) was formed in 1987 by bringing together separate pollution inspectorates covering air, water, waste and radioactive substances into a fully integrated environmental protection inspectorate. HMIP is responsible for implementing integrated pollution regulation of industrial processes under the Environmental Protection Act 1990 (EPA 90)[1] and also discharging responsibilities under the Radioactive Substances Act 1960[2], the Water Act 1990[3] and the Health & Safety at Work Act 1974[4]. HMIP also has responsibility for overseeing waste regulation and ensuring greater public involvement in the regulatory process.

When formed in 1987, HMIP had a staff of 177 which is now 301 and is planned to rise to 458 in the next few years.

This paper describes some aspects of development of HMIP, its current mission and experience to date in implementing integrated pollution regulation.

1 INTRODUCTION

One of the most significant changes in the UK in the past decade has been the dramatic increase in public concern about the environment.

Central to the strategy for environmental protection is the principle of stewardship which arises from the acknowledgement that we do not inherit the earth from our parents, we borrow it from our children. We must pass on our environment to future generations in a state which allows them to meet their own needs. This lies at the heart of a second principle of sustainable development which is widely accepted by governments around the world as a foundation for living with our environment. This does not mean zero growth or an end to consumption. Economic growth is essential if we are to maintain and improve living standards around the world and to afford the care for the environment that sustainable development demands. Industry's role is to provide the technological innovation and advances needed to meet the goal of sustainable development. But this must be done with full public knowledge and an openness that gains the full confidence of the public.

2 ENVIRONMENTAL PARTNERSHIP

It is important to emphasise the roles to be played by industry, the public, as citizens or as members of environmental pressure groups and of regulators such as HMIP in protecting and preserving our environment for future generations. There exists an inter-relationship between Government, industry and the public, with HMIP sitting in the middle with important two way relationships with each one.

The UK Government formulates policy on environmental protection and issues regulations and sets standards which HMIP must administer in regulating industry.

Industry in its turn must operate efficiently and effectively using clean technologies to ensure that no harm is done to the environment. This has not always been the case in the past. Indeed the first major piece of environmental legislation in the UK, the Alkali Act[5], came into force in 1864 to control discharges of hydrochloric acid because they had turned once verdant countryside in North-West England into an industrial wilderness. There can be few more

important areas in which industry and the business community need to raise, and to be seen to be raising, standards than the environment. For this to happen however, far more companies will need to pay rigorous attention to the quality of their environmental management. This will be particularly important as environmental pressures continue to rise in the years ahead. The business community will need to pay heed to three dynamics: setting standards, understanding markets and managing environmental performance. Those who get these right will find environmental pressures enhancing rather than hindering their competitiveness. Those who get them wrong will be losers. The message to industry is clear. Good pollution control goes hand in hand with technical excellence and business, rather than being an obstacle and a drain on resources.

The public for its part is increasingly playing the role of "green watchdogs". When a member of the public, either as an individual or as a member of a pressure group, suspects that a problem is occurring in the environment, HMIP welcomes being alerted to suspected pollution. We are developing a much closer and responsive relationship with the citizens of England and Wales.

3 HMIP'S MISSION FOR THE 1990s

HMIP's mission is to protect the environment by regulating industry to prevent pollution. To do this HMIP carries out the following activities:-

i) authorises, enforces, inspects and monitors under the relevant legislation;
ii) consults openly and widely and reports on its performance;
iii) provides expert advice to Government;
iv) initiates research and development and disseminates results;
v) works cost effectively and to the highest professional standards.

HMIP has set itself the following objectives:-

i) Integrated Pollution Regulation (IPR) and Integrated Pollution Control (IPC) implementation;
ii) preventive approach;
iii) high profile regulation;
iv) demonstrable effectiveness; and
v) proactive research.

None of this is completely new. HMIP and its predecessor inspectorates have done a good job and the benefits can be found in any industrial town in the UK. The current challenge is to do all of this even better and in doing so, show that HMIP is at the leading edge of environmental regulation.

3.1 Integrated Pollution Regulation

With the bringing into force of Part 1 of the Environmental Protection Act in April 1991, HMIP's regulatory framework became based on a truly cross-media philosophy. IPC and HMIP's other main regulatory functions are being carried out in accordance with the philosophy of integrated pollution regulation.

First it involves a systematic approach to regulation, which means developing the appropriate systems to ensure that HMIP's responsibilities are discharged efficiently, effectively and consistently in a consistent manner across all of the Inspectorate. **Second**, to implement these systems needs adequate guidance to inspectors and **third**, comprehensive training. Training helps maintain the level of professional expertise that is so vital to the effective functioning of the Inspectorate.

With a range of different, but integrated regulatory functions to perform, it is essential for HMIP to have the necessary range of expertise available. For this reason we have developed a team approach to field regulation. This is the **fourth** strand of the IPR approach. Teams are

made up of "professionals" each with their own specialist background and experience such as waste management, air pollution control, radioactive substances, administration etc. Each member will have the same basic training but will continue to develop his specialism and make this expertise available to colleagues. In this way, HMIP is able to take an expert and balanced view of pollution as it affects all media.

HMIP's field operation is divided into 7 geographic Regions as shown in Annex 1. Each Region has 5 to 6 inspection teams who are responsible for ensuring that all HMIP's regulatory functions are discharged in that Region.

3.2 The Preventive Approach

From an environmental standpoint, prevention is better than cure. For operators it is cost effective to reduce the creation of waste at source and much less disruptive to design effective controls and operating procedures into a plant, rather than face later remedial action. Any remaining wastes which are necessarily produced should be disposed of in the most environmentally acceptable way.

The three elements of the Inspectorate's approach are:-

i) guidance on process design and operation, in particular, through Chief Inspector's Guidance [IPR] Notes;

ii) avoidance of pollution risk by rigorous scrutiny and process design and operating arrangements, and reduction of waste creation at source, through the authorisation process; and

iii) deterrence, by using authorisations to set up monitoring regimes which will bring lapses in performance quickly and reliably to the attention of the operator, HMIP and the public; and by effective monitoring, inspection and enforcement regimes.

3.3 High profile Regulation

The history of the Inspectorate can be traced back to 1864 when the first Alkali Act was introduced. Since that time the Inspectorate has grown in size and in the areas of responsibility it covers. Regulation has been carried out effectively in the past, but the current public concern about environmental issues means that HMIP must demonstrate explicitly that it is doing its job effectively and be fully responsive to public concerns. HMIP will be seen to be active in inspections, audits, securing improvements and also prosecutions where appropriate. HMIP will also show a rapid and flexible approach, particularly to concerns raised by the public which will be dealt with in a systematic manner and with the minimum of delay.

But what does this mean in practice? The Environmental Protection Act provides for much greater public involvement in the regulatory process. For example, by requiring the Inspectorate to keep public registers available at our regional offices. We now have public registers available for Integrated Pollution Control, radioactive substances, atmospheric and water pollution regulation. But HMIP must go much further than simply meet legal obligations, by being pro-active in making the public more aware of our day to day activities. HMIP must present a human face to members of the public, we must be credible and above all, accountable.

We have taken steps recently to ensure that the regulatory systems we operate yield information that is available to and comprehensible by the public. For example, in future, the Inspectorate's annual report will be used to review our activities and our findings, to review our self-auditing procedures, our enforcement activities and the results of out monitoring strategy.

3.4 Demonstrable Effectiveness

It is not good enough that HMIP simply discharges its regulatory responsibilities, we must also seek ways of verifying our effectiveness by using appropriate performance indicators. Monitoring of the environment will play a key role here. Proposals are already in hand to carry out national monitoring of key parameters so that trends in levels of contaminants in the environment can be ascertained. Certain parts of UK industry are also planning to develop and

use their own environmental performance figures. This is just one way in which we can check the effectiveness of our work.

To aid work planning, HMIP has developed a comprehensive system of "norms" for the time to be spend on inspecting and overseeing each sector of industry so as to ensure fully effective regulation. These norms can be varied upwards or downwards, depending on the pollution potential of individual factories in the light of the size and frequency of operation or the competence of the operator. HMIP is also currently testing systematic procedures for Operator Competence Assessment (OCA) and the Pollution Risk Potential (PRP) of their processes.

In assessing the competence of operators, HMIP inspectors will be examining their performance against set criteria which include compliance with authorised limits, plant maintenance, records, plant instrumentation, managerial competence and commitment to environmental matters. Pollution Risk Potential will depend *inter alia* on an assessment of the toxicity of substances being handled, the scale of operation, incident history, complexity of operation and the potential for non-routine releases.

These assessments are currently the subject of field trials and results should be available towards the end of this year.

HMIP will also carry out internal checks on the quality of our operations and procedures. The introduction of quality assurance systems is vital to demonstrate the high and improving quality of the Inspectorate's activities. To this end we have recently adopted a Quality Assurance Programme which has the aim of achieving accreditation under British Standard 5750.

3.5 Pro-active Research and Development Programme

There is not only a need for short-term technical answers to today's pollution problems, but also for strategic forward planning in the long term. This particularly applies to HMIP's research programme. The main objective of the research is to provide necessary support for our regulatory activities. Research needs to be pro-active and have definite long-term goals which fit in with regulatory requirements. For example, HMIP is developing assessment methodologies necessary for making judgements on the impact of harm caused by releases to each environmental medium and for ensuring that authorisations are fully consistent with the concept of Best Practicable Environmental Option (BPEO). We shall be looking increasingly at how risk assessments can play a role here. There is also an important need to keep abreast of developments in process technologies and techniques so that the guidance to inspectors can have the benefit of thorough reviews of available techniques.

4 INTEGRATED POLLUTION CONTROL

As most of the industries HMIP regulates are aware by now, the statutory basis for IPC is provided in Part 1 of the Environmental Protection Act 1990. IPC requires that no prescribed process can be operated without a prior authorisation from HMIP. The prescribed processes to be controlled under IPC and the timetable for their introduction into the new systems as well as the prescribed substances are set out in detail in the Environmental Protection (Prescribed Processes and Substances) Regulations 1991[6] and are summarised in Annexes 2 and 3.

The Environmental Protection (Applications, Appeals and Registers) Regulations 1991[7] outline the procedures for applying to HMIP for authorisation, the information required by HMIP, the bodies which HMIP must consult and requirements for advertising the applications and for placing relevant information on a public register.

The requirements for involving the public in the authorisation procedure are a key aspect of IPC. They reflect our philosophy that the public has a right to know about pollution issues (subject to safeguards where essential, for confidentiality). HMIP is required either to grant an authorisation, subject to any conditions which the Act requires or empowers it to impose, or to refuse it. HMIP must refuse it unless we consider that the applicant will be able to carry on with the process in compliance with the conditions in the authorisation.

In setting the conditions, the Act places HMIP under a duty to ensure that:

- The Best Available Techniques (both technology and operating practices) Not Entailing Excessive Cost (BATNEEC) are used to prevent or, if that is not practicable, to minimise the release of prescribed substances into the medium for which they are prescribed; and to render harmless both any prescribed substances which are released and any other substances which might cause harm.
- Releases do not cause, or contribute to, the breach of any direction given by the Secretary of State to implement European Community or international obligations relating to environmental protection, or any statutory environmental quality standards or objectives, or other statutory limits or requirements.
- When a process is likely to involve releases into more than one environmental medium (which will probably be the case in many processes prescribed for IPC), the Best Practicable Environmental Option (BPEO) is achieved, ie the releases from the process are controlled through the use of BATNEEC to give the least overall effect on the environment as a whole.

The concept of BATNEEC contains an inbuilt dynamic towards higher standards because as available techniques improve, environmental protection standards be raised.

Process operators, and indeed the public, will require an assurance that BATNEEC is applied in a rational and consistent way. BATNEEC standards for each class of IPC process will be set out in published guidance notes which will be issued to inspectors. In preparing the notes HMIP will review available techniques internationally as well as tapping industry's own expertise and experience. Right at the outset, industry, through its various representative bodies, will have an opportunity to offer views on the factors that will need to be covered in each note. And before a note is finalised it will be issued in draft for comment and discussion by all interested parties.

5 CHIEF INSPECTOR'S GUIDANCE NOTES

The aim of the Notes is to provide guidance to inspectors on the main emission standards for prescribed substances arising from each process. They also outline the minimum standards that are expected to be attained by existing plant, and what constitutes BATNEEC for new plant and processes.

In preparing the Guidance Notes[8] HMIP takes into consideration the results of BAT research reviews that we have commissioned. Over thirty reviews of BAT have so far been commissioned.

This procedure will continue until around 180 Guidance Notes are issued and plans are already in place for the revision of the first Guidance Note on Large Combustion Plant. As more up-to date information, proven technology and standards come to light, others will also be updated.

6 IPC IMPLEMENTATION - EXPERIENCE TO DATE

IPC came into force on 1 April last year with the first tranche of processes being introduced. These included all new or substantially changed processes and all existing large boilers and furnaces. As with all innovatory and complex new systems, the implementation of IPC has involved tackling a number of difficult issues. Although HMIP has considerable experience of dealing with applications under other statutes, a considerable amount of preparation was required in advance of the April start date. This included an extensive training programme for all HMIP inspectors and key administrative staff. We also carried out a series of six trials involving key sectors of industry to test the proposed application and determination procedures.

To coincide with the introduction of integrated pollution control (IPC), the Department of the Environment published: "IPC - A Practical Guide"[9] to assist both ourselves and industry in meeting the requirements of the legislation. In addition, HMIP has published five Industrial Sector

Guidance Notes. In conjunction with the issuing of an extensive range of guidance documentation, each Region of the Inspectorate has invested a considerable amount of time in publicising the regulation procedures by attending numerous technical conferences and by holding a series of regional seminars on IPC which representatives from industry were invited to attend.

Even with the extensive preparations carried out by HMIP and industry, there have been a number of hiccups in the early stages of IPC implementation. First we were very disappointed at the quality of the majority of IPC applications, although some were more than adequate, requiring only minor additional pieces of information, the majority fell below what was necessary, some well below. In particular, some applications did not provide sufficient information to enable HMIP to carry out the environmental assessments necessary to determine IPC authorisations. As a consequence, HMIP had to write formally to many applicants specifying extra information that was required and this has, in turn, caused some delay in determining authorisations. However, processing of the first tranche of applications is now more than 90% complete, except for those where the applicant has appealed against HMIP's decision not to allow the applicant's claim for confidentiality.

In the light of our experience with the first tranche of IPC applications, HMIP inspectors have visited most operators who are due to apply for authorisation of the second tranche of processes (due 30 June 1992) to encourage operators to improve the quality of their applications.

7 CONCLUSIONS

The introduction of IPC has brought about a more structured relationship between UK industry and HMIP. Industry must be the provider of comprehensive information on which HMIP determines authorisations - a point emphasised by our going back to industry to request more information. Industry must also demonstrate compliance with authorisations by carrying out its own monitoring, instituting quality assurance procedures and generally providing information that assures the Inspectorate that the conditions in an authorisation are complied with.

HMIP will, of course, carry out inspections and conduct independent monitoring surveys. In future HMIP's inspections will be more intensive than in the past and we will be looking not only for compliance with authorisations but also to ensure that the industrial techniques used are of the required standard, ie that they are consistent with BATNEEC. This includes quality assurance, training and related aspects.

But HMIP will not squeeze British industry to death by generating paper mountains and seeking infinite detail about processes. There is a balance to be struck here so that industry can operate efficiently and effectively, using clean technologies to ensure that no harm is done to the environment. However, HMIP will take a very serious view if potentially polluting plant is operating without complying with the pollution control legislation. We are committed to ensuring a safe and clean environment and enforcing the legislation. If necessary, we will demonstrate our determination to tackle polluters by using the sanctions available in the legislation including, where appropriate, prosecution.

HMIP must be efficient in determining applications and enforcing authorisations. We will ensure that our systems are publicly accountable and will not be any hindrance to companies who can demonstrate that they are environmentally responsible.

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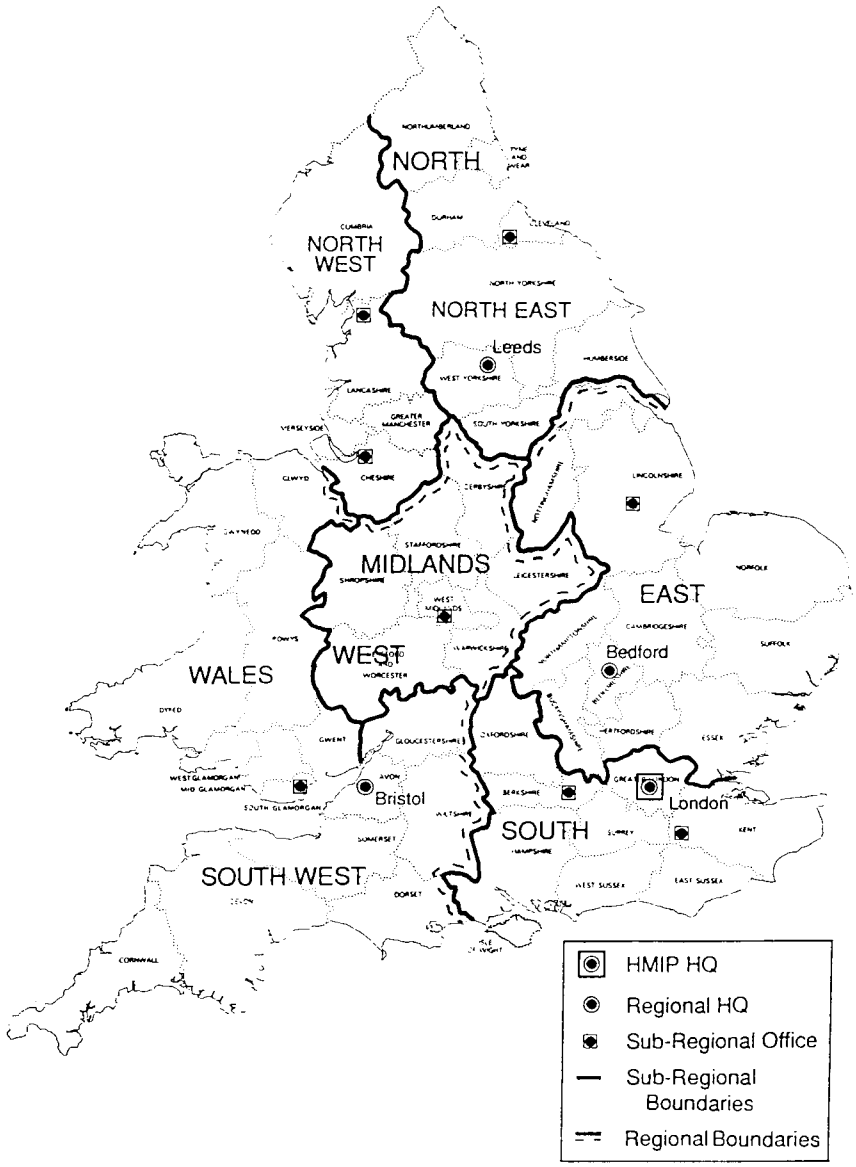
ANNEX 1

HMIP REGULATORY REGIONS



ANNEX 2

TIMETABLE FOR IMPLEMENTING INTEGRATED POLLUTION CONTROL

EPA SCHED. 1 REF	PROCESS	COMES WITHIN IPC	APPLY BETWEEN	CHIEF INSPECTOR'S GUIDANCE NOTE ISSUED*
	Fuel & Power Industry			
1.3	Combustion (>50MWth) Boilers and Furnaces	1.4.91	1.4.91 & 30.4.91	1.4.91
1.1	Gasification	1.4.92	1.4.92 & 30.6.92	1.2.92
1.2	Carbonisation	1.4.92	1.4.92 & 30.6.92	1.2.92
1.3	Combustion (remainder)	1.4.92	1.4.92 & 30.6.92	1.2.92
1.4	Petroleum	1.4.92	1.4.92 & 30.6.92	1.2.92
	Waste Disposal Industry			
5.1	Incineration	1.8.92	1.8.92 & 31.10.92	1.4.92
5.2	Chemical Recovery	1.8.92	1.8.92 & 31.10.92	1.4.92
5.3	Waste Derived Fuel	1.8.92	1.8.92 & 31.10.92	1.4.92
	Mineral Industry			
3.1	Cement	1.12.92	1.12.92 & 28.2.93	1.6.92
3.2	Asbestos	1.12.92	1.12.92 & 28.2.93	1.6.92
3.3	Fibre	1.12.92	1.12.92 & 28.2.93	1.6.92
3.5	Glass	1.12.92	1.12.92 & 28.2.93	1.6.92
3.6	Ceramic	1.12.92	1.12.92 & 28.2.93	1.6.92
	Chemical Industry			
4.1	Petrochemical	1.5.93	1.5.93 & 31.7.93	1.11.92
4.2	Organic	1.5.93	1.5.93 & 31.7.93	1.11.92
4.7	Chemical Pesticide	1.5.93	1.5.93 & 31.7.93	1.11.92

EPA SCHED. 1 REF	PROCESS	COMES WITHIN IPC	APPLY BETWEEN	CHIEF INSPECTOR'S GUIDANCE NOTE ISSUED
4.8	Pharmaceutical	1.5.93	1.5.93 & 31.7.93	1.11.92
4.3	Acid Manufacturing	1.11.93	1.11.93 & 31.1.94	1.5.93
4.4	Halogen	1.11.93	1.11.93 & 31.1.94	1.5.93
4.6	Chemical Fertiliser	1.11.93	1.11.93 & 31.1.94	1.5.93
4.9	Bulk Chemical Storage	1.11.93	1.11.93 & 31.1.94	1.5.93
4.5	Inorganic Chemical	1.5.94	1.5.94 & 31.7.94	1.11.93
	Metal Industry			
2.1	Iron and Steel	1.1.95	1.1.95 & 31.3.95	1.7.94
2.3	Smelting	1.1.95	1.1.95 & 31.3.95	1.7.94
2.2	Non-ferrous	1.5.95	1.5.95 & 31.7.95	1.11.94
	Other Industry			
6.1	Paper Manufacturing	1.11.95	1.11.95 & 31.1.96	1.5.95
6.2	Di-isocynate	1.11.95	1.11.95 & 31.1.96	1.5.95
6.3	Tar and Bitumen	1.11.95	1.11.95 & 31.1.96	1.5.95
6.4	Uranium	1.11.95	1.11.95 & 31.1.96	1.5.95
6.5	Coating	1.11.95	1.11.95 & 31.1.96	1.5.95
6.6	Coating Manufacturing	1.11.95	1.11.95 & 31.1.96	1.5.95
6.7	Timber	1.11.95	1.11.95 & 31.1.96	1.5.95
6.9	Animal and Plant Treatment	1.11.95	1.11.95 & 31.1.96	1.5.95

* Target date

ANNEX 3

PRESCRIBED SUBSTANCES

Release to air: Prescribed substances

Oxides of sulphur and other sulphur compounds
Oxides of nitrogen and other nitrogen compounds
Oxides of carbon
Organic compounds and partial oxidation products
Metals, metalloids and their compounds
Asbestos (suspended particulate matter and fibres), glass fibres and mineral fibres
Halogens and their compounds
Phosphorus and its compounds
Particulate matter

Release to water: Prescribed substances

Mercury and its compounds
cadmium and its compounds
All isomers of hexachlorocyclohexane
All isomers of DDT
Pentachlorophenol and its compounds
Hexachlorobenzene
Hexachlorobutadiene
Aldrin
Dieldrin
Endrin
Polychlorinated Biphenyls
Dichlorvos
1,2-Dichloroethane
All isomers of Trichlorobenzene
Atrazine
Simazine
Tributyltin compounds
Triphenyltin compounds
Trifluralin
Fenitrothion
Azinphos-methyl
Malathion
Endosulfan

Release to land: Prescribed substances

Organic solvents
Azides
Halogens and their covalent compounds
Metal carbonyls
Organo-metallic compounds
Oxidising agents
Polychlorinated dibenzofuran and any congener thereof
Polychlorinated dibenzo-p-dioxin and any other congener thereof
Polyhalogenated biphenyls, terphenyls and naphthalenes
Phosphorus

Pesticides, that is to say, any chemical substance or preparation prepared or used for destroying any pest, including those used for protecting plants or wood or other plant products from harmful organisms; regulating the growth of plants; giving protection against harmful or unwanted effects on water systems, buildings or other structures, or on manufactured products; or protecting animals against ectoparasites.

Alkali metals and their oxides and alkaline earth metals and their oxides.

COMPLIANCE MONITORING IN POLAND: CURRENT STATE AND DEVELOPMENT

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1 INTRODUCTION

Communist governments were notorious for their fallacious development policies and poor environmental records. It is less known however, that - at least in Poland - environmental problems were not caused by the absence of environmental laws, but first of all by the fact that these laws were not enforced.

When the communist government collapsed in 1989, there were no doubts that a new environmental policy was badly needed, and that this new policy, in order to be implemented, required not only new laws, but first of all an effective enforcement, based on a comprehensive system of monitoring compliance. A significant progress in this area was made in 1991, the reform however is still far from being completed.(1)

Bearing in mind that sufficient organizational arrangements are a prerequisite for an effective regulatory scheme, before describing more in detail the current state and perspectives of monitoring compliance, it will be useful to present an overview of the organizational arrangements, emphasising their shortcomings and the attempt to remedy these shortcomings made in 1991.

2 ORGANIZATIONAL ARRANGEMENTS

2.1 The overall structure and its shortcomings before 1991

Responsibilities for monitoring compliance with environmental laws are divided between public health and environmental authorities. As a public health authority acts the State Sanitary Inspectorate.

The Inspectorate is a central agency, with the Chief Sanitary Inspector at the top, and regional inspectors (at the voivodship level) as well as district inspectors (at the municipal or local commune level). The number of the Inspectorate's employees totals several thousends. The Inspectorate has a well established system of area monitoring and inspectors have broad inspection and enforcement powers. In carrying out its activities, however, the Sanitary Inspectorate is interested in compliance with environmental standards only insofar as the public health or occupational safety and health issues are involved. Therefore, despite the fact that its area monotoring data provide a valuable input to monitoring compliance, the role of the Sanitary Inspectorate in environmental law enforcement is of secondary importance, as compared with the role of environmental authorities. And here, the division of powers between environmental authorities was a very controversial issue for years.

In the communist government's environmental regulatory programme, the most significant authority and responsiblity for administering environmental laws resided with a governor (the chief of the governmental administration in a voividship). Governors were made responsible not only for issuing permits, setting individual allowable emmission and discharge levels, and collecting fees for use of natural resources but also for monitoring compliance and enforcement. Governors, in carrying out their functions as environmental authorities, were assisted by their environmental officers, and their Environmental Survey and Monitoring Centres (commonly referred to as OBiKS). Altogether, in 49 voivodhips, the number of environmental officers in 1989 totalled 1325, whereas the number of OBiKSs' employees totalled 2422.

The Environmental Protection Act of 1980 (EPA 1980) supplemented the framework of environmental authorities with a central government's monitoring compliance agency: the State Environmental Protection Inspectorate (commonly referred to as PIOS). The organizational

structure of PIOS, as provided by the EPA 1980, consisted of the Headquarters and 6 Regional Offices. PIOS was a relatively small agency (about 400 employees) reporting directly to the Environment Minister. PIOS did not have any enforcement powers. The major shortcomings of the above described organizational arrangements were: lack of clarity as to the roles and responsibilities of various agencies involved in monitoring compliance and enforcement, and lack of coordination of their efforts. They used an assortment of methods and procedures, which prevented any comparison of results. There was no system of checking the calibration of instruments, and no certification of laboratories. The agencies were understaffed and equipped with absolute, manually operated measurement devices(2). Bearing in mind the size of regulated community (more than 40.000 registered stationary sources of air pollution, about 3.000 industrial plants discharging effluents directly to watercourses) , there is nothing surprising that inspections were to no avail.

PIOS was meant to be an "environmental watchdog", that was however a watchdog without teeth: it had neither sufficient tools to coordinate monitoring efforts nor any enforcement powers. Polish law provided that only individuals could be held criminally liable, but prosecutions against directors of polluting companies were rarely brought to courts by public prosecutors(3). As an equivalent of criminal liability of legal persons, the EPA 1980 established special administrative sanctions. Governors were empowered to halt activity endangering the environment and to impose non-compliance fines. Governors however, being primarily responsible for the economic development of their voivodship, were extremely reluctant to halt any economic activity and limited themselves to imposing fines. Bearing in mind that non-compliance fines were very low and offered a cheaper option than compliance, there is nothing surprising that environmental laws were in practice unforceable.(4)

2.2 Improvements: the State Environmental Protection Act of 1991

The 1991 Act is an attempt to remedy the above described shortcomings by strehghtening the role of PIOS. The Act gives PIOS enforcement powers previuosly carried out by governors and provides it with the sufficient status and resources to cope with its new responsibilities.

The 1991 Act incorporated OBiKSs to the structure of PIOS, which now consists of the Headquarters and 49 branches at the voivodship level. The number of its employees totals 2.500. Inspectors have the power to impose non-compliance fines, to halt activity endangering the environment, and to ban the sale and import of raw materials, fuels, machinery and other technical appliances and goods which fail to meet environmental requirements. No new facility or activity which may cause harm to the environment, may start operation, until PIOS is notified and satisfied with the application of mitigation measures (this powerful new tool has prooved itself recently, when the new Warsaw Airport, an investment worth US$ 2 billion, having been formally opened by the Prime Minister, was prevented from starting operation by a PIOS inspector). Apart from enforcement powers and inspections, PIOS is responsible also for assessing the risk of, preventing and combating the accidents (ecological disasters), as well as for management of the nationwide environmental data system. To this end it has some coordination powers, as for example: tocertify that laboratories apply good laboratory practice or to provide guidelines as to the methods of measuring, sampling etc. All agencies involved in monitoring compliance are bound to cooperate with PIOS by coordinating plans of inspections and exchanging information. PIOS cooperates also with the police, customs officers and border officers.

3 FORMS OF COMPLIANCE MONITORING

3.1 Inspections

Inspections are conducted only by government inspectors. They may notify the facility prior to inspection or arrive unannounced. Inspectors plan inspections, gather data in and/or around a particular facility, record and report on their observations, and - if there is a direct danger to

human health or life, or direct and significant danger to the environment - have the right to issue decisions as to preventing the risk, which are to be realised immediately.

Inspections may be routine (those usually planned on the monthly base) or "for cause" (usually as a result of citizens' complaints, police reports or the request of a governor). Inspections may also be either complex ones or single-media oriented. In case of the first ones, usually there are 10-12 inspectors involved, and their task is to examine entire environmental performance of a plant. In case of the latter ones, there are only 1-3 inspectors involved, focusing on a single issue (for example: water management within a plant). The average capacity of a PIOS's voivodship branch is 3-4 complex inspections or 20-30 single-media inspections.The recent PIOS's policy favours complex inspections.

The inspector has the right to enter facilities (with experts or whoever else he needs), to interview facilities' personnel, to have access to all files, documents and records, to observe operations, and to take samples for analysis. The inspector has to provide the manager of inspected facilities with his report. The manager has the right to introduce to the report his comments or reservations.

The report is a basis either for issuing a decision as to applying some new mitigation measures or for enforcement measures (non-compliance fines or halting harmful activity) to be imposed by the chief of the respective voivodship branch of PIOS. It is worth mentioning that PIOS is entitled to recover the costs of inspecting facilities if the inspection resulted in findings of non-compliance.

3.2 Self-monitoring, recordkeeping and reporting by the regulated community

Self-monitoring, recordkeeping and reporting are required by regulations in relation to water pollution, air pollution and storage of waste.

In case of self-monitoring and recordkeeping, the general regulatory requirements are usually being translated to facility-specific requirements via permits. Only air pollution regulations provide for specific requirements in certain cases (for example, a plant in which a stationary source emits within an hour more than 12000 kg of SO2 or 800 kg of dust, is bound to monitor emmision from each emitor permanently). In case of reporting, the detailed requirements are provided by the regulations themselves. Reporting is not related to permits but to a scheme providing special fees for the use of natural resources (for use of water, for discharge effluents to water, for air emmission and for storage of waste) (5). The regulations provide for detailed requirements as to reports and set 31 of January as a deadline for producing an annual report. If a plant fails to meet the deadline or requirements as to the report, the fee is charged upon discretion and applied are fee rates of the day (this provision is very important because fee rates are being increased usually every year).

3.3 Environmental auditing

The EPA 1980 authorises governors to require from managers of existing facilities to provide an environmental impact assessment concerning their facilities. The assessment is to be prepared by the expert indicated by the governor, but costs are to be borne by the manager of facilities. In case of not providing the assessment within the fixed time, the governor may commission an expert to prepare it on the expense of the manager of facilities at question. Experts can be drawn only from the list of verified EIA experts, which is carried out by the Environment Minister. The 1990 regulations on the EIA provides for detailed requirements as to the content of EIAs concerning existing facilities.(6) Besides the requirements established for project-related EIAs, EIAs concerning existing facilities should: 1) refer to information about the state of the environment gathered prior to construction, and during operation of a given plant or facilities, 2) take into account the quantitative data as to the water consumption and all kinds of pollution, gathered during operation of a given plant or facilities, 3) estimate the present and anticipated impacts on particular elements of the environment and on human health. In 1990 the Environment Minister prepared a list of the top 80 industrial polluters in Poland, and requested respective governors to require EIAs from their managers. These EIAs were not meant to serve

primarily as enforcement tools, but to serve as foundations for establishing special pollution reduction programmes, to implementing which they were obliged over the next three to five years. The same scheme is being applied currently at the voividship level, where the top polluters for given areas have been recognised (there are about 800 those locally significant polluters).

3.4 Citizen complaints

There are no special programmes that encourage citizen involvement in monitoring compliance or help educate and train citizens to detect and report problems. Nevertheless, citizen complaints are estimated to be a significant source of detecting violations (PIOS's inspections resulting from citizen complaints are estimated about 100 a year). Very important role play here members of non-professional guards (Nature Protection Guard and Angling Guard) which are the "mailed fists" of nature conservation NGOs (7). Though they are trained to assist governemtal agencies onlyin enforcing nature conservation laws, they often reports also on non-compliance with pollution standards.

3.5 Area monitoring

Area monitoring does not use as yet sophisticated methods and is based on stationary stations of ambient monitoring. Well established networks of such monitoring stations are maintained by the State Sanitary Inspectorate and hydrological and meteorological services. PIOS only recently is trying to supplement these network with some more sophisticated monitoring techniques. The above mentioned national environmental data base system (commonly refered to as Monitoring System) is being created now by PIOS with a significant foreign financial assistance.

4 PERSPECTIVES

The improvement in monitoring compliance, though significant, does not seem to be sufficient. First of all, the existing regulatory scheme has to be redesigned in relation to environmental auditing. Under the existing scheme, companies may reasonably argue that monitoring compliance is that what they are paying taxes for, and as long as their non-compliance has been proved, they should not be made responsible for the costs of performing audits. Moreover, governors designate auditors, but that is a company which pays additional costs if an EIA has to be corrected.

The new law must choose between two options: either environmental auditing treated as an element of building credibility of companies or treated as an element of enforcement. In the first case new environmental auditing scheme in Poland would be similar to the eco-auditing scheme currently being considered by the EC. There is still to be decided whether this kind of scheme should be voluntarily or obligatory, but there are no doubts that companies should be free to choose auditors (perhaps from the list of veryfied auditors) and that should be some incentives for building credibility in this form (perhaps an eco-label).

If, however, auditing is to serve as an element of enforcement, there is no doubt that companies should not be made paid for audits and be responsible for the mistakes done by auditors.

It must be mentioned,that in course of law-drafting works, two new forms of monitoring compliance are being considered.

The first form is aiming to get the public involved in monitoring compliance by redesigning the institution of public environmental wardens provided by the EPA 1980. In the new design, wardens, being nominated from the well-qualified and responsible citizens, would have almost the same rights to inspect facilities as PIOS inspectors have. Wardens would be assisting PIOS in monitoring compliance and have the right to institute enforcement proceedings similar to public prosecutor powers.

The second form being considered is reforming decision structures within corporations. The aim is to link (following German (8) and Japanese (9) experiences) corporate's environmental control with governmental control and to have a kind of publicised environmental control within corporations. To this end, the top polluters (listed by the Environment Minister) would be obliged to establish a separate "environmental service" with an environmental director at board of directors level. The environmental director would have some statutory duties and powers within the company. There should be also defined qualifications of those legally charged with environmental responsibilities (for example: with self-monitoring, recordkeeping or reporting) in the companies listed as top polluters, and a special procedure in which their nomination or dismissal would need to be consulted with PIOS.

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ENFORCEMENT OF THE ENVIRONMENTAL POLICY IN THE FIELD OF THE MONTREAL PROTOCOL IN THE CSFR

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1 INTRODUCTION

Environmental questions currently form one of the most important internal as well as international political problems calling for an increased attention of any state.

One of the most important problems of the environmental protection is the protection of the atmosphere. Adhering to undertakings of the Montreal Protocol concerning substances damaging the ozone layer and to its London refinement presents a basis for minimizing damages resulting from the reduction of the thickness of the ozone layer.

Already in the period of the directive political and economic regime, Czechoslovakia as a relatively advanced industrial country with its own production and consumption of compounds damaging the ozon layer, followed the development concerning the Vienna Treaty and Montreal Protocol and implemented certain, though if limited, porvisions necessary to prevent further damages to the ozone layer.

It is for example possible to remind that already since 1981, in Czechoslovakia, the use of carbon dioxide as a driving gas for aerosol products has been started. Mechanical spraying pumps have also been developed and patented in Czechoslovakia on the basis of own research results and their production has been started. Thus, the concumption of Freons in Czechoslovakia did not exceed 0,5 kg per citizen annually up to the end of the 1980's.

A specialized working site of the Czech Hydrometeorological Institute has also paricipated for 30 years in the observastion and research of the ozone layer within the scope of the monitoring project of the world Meteorological Organization (WMO). The solar and ozone observatory of this Institute in Hradec Králové is a part of the global monitoring network and it performs daily measurements of the total ozone amounts in the atmosphere.

All these activities, however, occurred without a deeper co-ordination by the state policy.

The attempts to co-ordinate these approaches can be observed only after 1987 in connection with the Vienna Treaty and Montreal Proctocol.

From the standpoint of the central planning system, an apprehesion was, however, encountered that by signing these documents, guaranties will originate, which could be hardly fulfilled by the central authorities. Thus, the works carried out for providing the Czechoslovak approach to the problems mentioned, were particularly aimed at the investigation of economic results.

A complex technical and economic analysis was elaborated, which indicated impacts particularly in the foreign currency and investment regions. The possibility of adhering to requirements of the Montreal Protocol was shown to be quite realistic, of course with high requirements for centrally assigned financial means for investments. On the other hand, the positive approach to the Montreal Protocol was shown to be more advantagenous than accepting of the hazard of negative economic impacts resulting from disregarding it.

Together with the approach to the Protocol, requirements occurred for introducing a number of subsequent provisions of the co-ordination, organization, research and production nature in the field of the state sphere as well as in particular organizations, since without their implementation, the production capacity of a great variety of goods containing substances damaging the ozone layer would be reduced by at least several milliards of Kcs annually. The state authorities, however, ever hesitated to implement the approach to the Montreal Protocol. Only the change of the political situation in the CSFR in the November 1989 essentially accelerated the attempts for the international cooperation in the field of ecology and also facilitated more rapid accepting of a decision concerning the approach to the Montreal Protocol.

2 THE ORGANIZATION OF FULFILLING THE VIENNA TREATY AND MONTREAL PROTOCOL

Even under new economic conditions, the importance and need of the role of the state in solving the regulation of the production and comsumption of substances damaging the ozone layer was shown.

In the CSFR, in accordance with the valid Constitution and Constitutional Laws, the formulation of the state ecological policy from the organinzation, legislative and international-law standpoints falls into the competence of the Federal Committee for Environment.

This central authority currently replaces the Federal Ministry of Environment from the standpoint of the international law and it organizes the fulfillment of tasks resulting for the CSFR from the internationally accepted treaties and documents. This particulary means the determination of further procedures in the relevant region of the time schedule of preliminary works, treatment of regulation schematic diagrams with respect to specific features of particular consumers of Freons in the CSFR, and preparation of legislative provisions with a possible consideration of legislative provisions with a possible consideration of economic tools for adhering to this international undertaking.

In the preparation of relevant provisions, the Federal Committee for Environment tightly cooperates with Republic authorities for environment - Ministry of Environment of the Czech Republic and Slovak Commission for Environment.

3 THE PRODUCTION AND CONSUMPTION OF SUBSTANCES DAMAGING THE OZONE LAYER IN THE CSFR

The CSFR does not belong to the group of the most important producers and consumers throughout the world: in spite of this, the production and consumption of compounds damaging the ozone layer is of importance.

The production of regulated Freons (types 11, 12 and 113) was of about 2 000 ton annually in 1986 to 1991, that of tetrachloromethane was of about 5 000 ton annually.

The consumption of Freons in the initial year of the regulation (1986) was about 7 000 ton/year and its portion of about 70% was covered by the import. Halones (20 to 50 ton/year) and methylchloroform (of about 250 t/year) are imported to cover the complete volume of their consumption.

The distribution of the consumption is similar to that in the other industrially advanced countries (driving gases for aerosols, coolants, blowing agents, cleaning means and solvents).

4 THE APPROACH TO PROVIDING THE MONTREAL PROTOCOL IN THE REGION OF THE STATE SPHERE

After joining the Montreal Protocol, a problem was encountered of implementing provisions necessary for fulfilling duties resulting from this document.

We believe that there is no uniform method for a further continuation in the signatory countries for providing the fulfillment of the Montreal Protocol. The provisions adopted should concern the economic as well as state sphere.

In the economic sphere, the producers, users and importers of the substances damaging the ozone layer will be forced to face technical problems and simultaneously to provide the economically most advantageous solution. In the market system, this duty will be imposed onto the organizations themeselves, in spite of the fact that a possibility of state subventions cannot be precluded in certain cases.

The task of the state authorities should parrticularly be the formation of legislative provisions, of the system for following and checking the undertakings accepted, the elaboration of basic data within the scope of the international co-operation, the mediation of the technical help and the assistance during its organization, the control of fulfilling undertakings, etc.

The policy of the state authoristies must be, of course, in argreement with the activity in the economic sphere.

We have primarily encoutered the requirement for the system approach, which could be employed to obtain a program including basic concepts considering the method of fulfilling the duties imposed by the Montreal Protocol.

The basic task of the system approach include the processing of the following items:

- system of the program management (managing and executive authority)
- legislative provisions
- economic tools supporting the regulation
- regullation plan
- methods of providing and checking the settled regulation (in connection to the legislative accepted)
- proposals of replacement for the regulated substances
- method of keeping records and balances of the production, consumption and foreign trade with the regulated substances (montoring system)
- project of the collection, recovery and recycling of used coolants
- program for the information and involvement of the public in favour of replacing the substances damaging the ozone layer.

Particular points are stepwise being implemented in accordance with this concept.

A top controlling authority was established as an advisory board of the Federal Committee for Environment including representatives of the Committee and of further Ministries interested in this topic (particularly Republic Ministries of environment, industry, agriculture and economy), producers and big consumers, which is supposed to co-ordinate the whole problem in direction of the domestic as well as foreign economic sphere. It assigns relvant tasks, considers the provisions proposed and provides methodic guiding of the exucutive authorities.

The focus of interest is in the territory of the Czech Republic, where all the production and of about 80 to 85% of the Czechoslavak consumption are concentrated.

As the executive authority, we consider as purposeful establishing of two national centres providing the recording, balancing, regulating, controlling and informational activities.

Besides this, for solving the complicated replacement of Freones and halones in the cooling and anti-fire technique, we considered a proposal of establishing expert groups including specialists working in these branches as reasonable.

The group of specialists in the cooling techique also deals with the problem of the collection of coolants, of their recovery and recycling (including training of service technicians, issuing of licences for this activity, etc.).

We assume the following problems to be treated by the executive authority:

1. Following of the production, consumption, import and export of compounds damaging the ozone layer.
2. Processing or possibly control of these data, processing of summarizing balances for domestic central as well as foreign authorities (Federal Committee for Environment, UNEP).
3. A cooperation in forming the regulation plan in accordance with the London Supplement to the Montreal Protocol.
4. The informational activity concerning newly accepted undertakings and the supplement to the Montreal Protocol.
5. Following of replacement for the compounds damaging the ozone layer and further data concerning this problem from foreign data bases.
6. A program for informing the public about the danger resulting from the damage to the ozone layer and about provisions for avoiding the daily use of substances damaging this layer.

When treating the legislative, we considered different variants of approaches. Last, with respect to the association of the CSFR to the EC countries it was shown that the Czechoslovak legislative tools should be obligatorily prepared in agreement with the EC countries. At the end of

1991 a proposal of the Law concerning compounds damaging the ozone layer of the Earth was prepared., which was based on the COUNCIL REGULATION (EEC) No. 594/91 dated 4. 3. 1991.

The regulation in the CSFR accepts the term as well as volume restrictions of compounds damaging the ozone layer, identical with those in the EC countries.

A regulation plan has also been elaborated with respect to these conditions. First, the regulation of the production and use of aerosol products is included, after that the regulation of expanding agents for producing the expanded materials, of cleaning products and solvents and last, the replacement of coolants and limited use of regulated compounds for medical purposes is presented.

There was a considerable discussion concerning the methods of implementing the regulation. Possibilties were considered either of introducing a certain quota system for particular consumers or of implementing the regulation solely on the basis of legislative provisions and related Regulations.

After taking into account all the advantages and disadvantages with respect to the existing development of the consumption of substances damaging the ozone layer under the new economic conditons in the CSFR, we achieved a conclusion that the regulation solely with the help of suitable legislative provisions will be sufficient. Thus, the method is similar to those employed in the EC countries - see e.g. a Regulation concerning the prohibition of using certain halogenated hydrocarbons damaging the ozone layer, dated 6.5.1991, issued in the FRG.

We do not deny the possibility that the method used e.g. in the USA, co-ordinated by the Environmental Protection Ágency (EPA), where production and consumption permits are issued for the predetermined amounts, could also be used in our country. It would be, however, impossible to control particular directions of the use in the same manner due to unreadiness of our refrigeration industry to introduce a replacing coolant, so that resulting regalatiom scheme would be the same as in the first case. It would be, however, achieved in a much more complicated manner.

Even in the use of procedural regulations, it will be necessary to consider possible exceptions, e.g. in the case of sprays for asthmatic patients.

The following and control of the obligatory regulation of compounds damaging the ozone layer is anchored in the legislative. The producers, importers and consumers are due to keep relevant records and to submit relevant reports.

These reports are accumulated and evaluated by the executive authority, which elaborates on the basis of them summarizing balances for domestic central authorities and for the UNEP secretariate in Nairobi.

The data aubout the import have been yet obtained in the monopolistic importer Chemapol joint-stock Co.

With the degradation of the central management and with making possible the foreign trade activity for many furhter subjects it will be necessary to use custom authorities similarly as they are used in abroad. This approach was partially also recommended at the session of signatory countries of the Montreal Protocol in London in June 1990, where a conclusion was approved that the compounds damaging the ozone layer should occur in the statistical nomenclature as soon as possible.

Thus, the regulated substances should be included into the custom tariff of rates in a detailed classification according to Attachments to the Montreal Protocol.

5 A RECAPITULATION OF THE PROBLEM AND EXPERIENCE WITH INTRODUCING THE MONTREAL PROTOCOL IN PRACTICE

On Juni 21, 1990, the Government of the CSFR has approved the Montreal Protocol and since Dec 30, 1990, the CSFR officially became a party of this proctocol. On June 4, 1992, the Federal Government approved the Supplement to the Montreal Protocol, accepted in London in June 1990 and appointed the minister of the CSFR Government J. Vavrousek to implement provisions connected with accepting the changes and the Supplement to the Montreal Protocol, to elaborate a program of reducing the use of compounds damaging the ozone layer and to present

reports to the Government about the implementation of this program. In addition to the above mentioned program, a proposal of the federal legislative was also prepared, which already considered new regulations of EC countries concerning compounds damaging the ozone layer issued in 1981 with respect to the association of the CSFR to EC countries.

During the elaboration of principles of the state policy concerning the Montreal Protocol, requirements were manifested for a cooperation and acquiring of experience in advanced signatory countries.

For this purpose, thanks to the Netherlands, which was willing to help very much, a project of the Czechoslovak-Holland cooperation wa established. Within the scope of this project, the Czechoslovak concept of the CSFR approach was conculted and the experience with introducing the Montreal Protocol in practice in different branches of the economy as well as in the state sphere was acquired.

The first practical experience with the approach of Czechoslovak organizations interested in fulfilling the Montreal Protocol can be considered as positive.

The enterprises altogether undrestand the need of the regulation of ecologically harmful substances and they prepare reserve solutions within the range of their possibilities. This is hindered by insufficient investment financial means, which were formerly assigned for similar cases by central state authorities. it is most simple to replace expanding agents and cleaning products, where the technology solution is not connected with high investment requirements and is being performed in a cooperation with a foreign supplier of the relevant technology. There is also a positive effect of the privatization process, during which the state enterprises change their owners in favour of the foreign particpation.

The replacement in the refrigeration industry will be complicated, since the introduction of new coolants is connected with high investments. The solution should be obviously also found in a cooperation with foreign partners, possibly also with granting a credit.

Nevertheless, with the beginning of the transition to the new economic conditions, particularly since 1991, in the CSFR, there is a strong decrease of the consumption of compounds damaging the ozone layer. As an illustation, it is possible to mention that in 1991, the consumption of the regulated Freons dropped to 42% of the initial value in 1986.

This was mostly due to the restructuralization of the production and market problems connected with the economic stagnation. However, thanks to an increased openness of the Czechoslovak economy to abroad, the Czechoslovak enterprises have already started to actively implement substitution methods, as e.g. the production of aerosol products with replacing propellents (propane-butane, air, etc.).

It is considered that the state policy in the regulation of substances damaging the ozone layer (as indicated in preceding chapters) will be completely implemented since the beginning of 1993. It will undoubtedly contribute to providing duties imposed by the Montreal Protocol.

DEVELOPING AUTHORITIES AND LEGAL ENFORCEMENT CAPABILITIES TO RESPOND TO ENVIRONMENTAL VIOLATIONS

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SUMMARY

This paper provides an overview of over twenty years of U.S. experience in designing effective authorities to enforce our environmental laws and policies. The effort draws on our legislative, executive and judicial branches. Section 2 surveys the roles of federal, state and citizen enforcers. Section 3 looks to various legislative authorities underlying our enforcement program. Section 4 considers specific executive branch enforcement policies and procedures, particularly as they relate to proceedings in our courts. Section 5 concludes with some ways the U.S. has devised to ease the enforcement burden.

1 INTRODUCTION

Over twenty years of U.S. experience have shown that two elements are vital to ensuring a clean environment: (1) a sound and comprehensive set of environmental laws and standards; and (2) swift and certain enforcement for those choosing to ignore those laws and regulations.

Generally, U.S. enforcement is designed to correct non-compliance, remove the profit reaped by the illegal pollution, impose additional penalties -- including the possibility of imprisonment -- to deter more violations by the actual polluter and others in the regulated community, and to redress the actual damage done. In the recent past, enforcement of U.S. laws has resulted in billions of dollars in cleanups and new pollution control equipment, and tens of millions of dollars in civil and criminal penalties.

Many nations, like the U.S., have enacted strong environmental laws. The U.S., however, may use different means of enforcing those laws than other countries. In Mexico, for example, with an extensive body of environmental law and regulation, enforcement is almost exclusively the province of the executive branch. Rarely does the judicial branch of the Mexican government ever enter the enforcement picture.

In the U.S., by contrast, while relying heavily on administrative authorities ourselves, the use of the judicial branch by the executive to enforce environmental laws is at the heart of our enforcement system and philosophy. As we enter our third decade of enforcement, the lesson in the U.S. is clearer than ever: bringing civil and criminal prosecutions against environmental offenders -- and the threat of prosecution for those tempted to violate the law -- is the surest way to make the regulated community adhere to environmental standards and employ responsible environmental practices.

2 OVERVIEW OF U.S. ENFORCEMENT

2.1 Powers of the Federal Government

Enforcement by the federal government of environmental laws and standards may take several forms: (1) administrative (handled within the executive branch agency); (2) civil; and (3) criminal. The latter two are pursued in federal courts by the Department of Justice on behalf of federal agencies, primarily EPA.

2.1.1 Resource Specific Statutes

Federal enforcement is governed by federal law, and in the U.S. system, unlike that of many countries, federal environmental law is usually broken down according to the media or resources affected. Unlike many nations, we do not have a single overarching environmental law. For example, we have enacted the Resource Conservation and Recovery Act to regulate transport, treatment, storage and disposal of hazardous waste. The Clean Air Act and Clean Water Act regulate discharges into those media.

Our Superfund law, which forces cleanup of abandoned hazardous waste sites, and holds private parties liable for cleanup costs and damages to natural resources, takes enforcement a step beyond other laws. Building on principles of common law tort, Superfund provides for strict joint and several liability. Superfund also provides for recovery of triple damages if responsible parties refuse to clean up after being ordered to. Thus, Superfund's enforcement clout is a powerful deterrent to polluters.

2.2 Powers of the States

Federal enforcement authorities often work side-by-side with State authorities. Many federal environmental laws (e.g., Clean Water Act, Clean Air Act) encourage States to develop their own regulatory and enforcement programs to parallel federal law. If States do so, and their programs are approved by EPA because they are consistent with national pollution standards and policies, States may be given "delegated" authority to issue permits and take enforcement actions. Moreover, States are free to enact environmental laws more stringent than federal laws.

2.2.1 Scope of State Enforcement

In practice, States with "delegated" authority issue the vast majority of all permits and bring the largest number of enforcement actions against violators.

Depending on the state legislation, state enforcers may be able to impose administrative penalty orders for violations, and bring judicial actions for civil, and sometimes criminal, penalties in state courts. In recent years, State authorities have been particularly active in enforcing their laws against illegal dischargers of toxic substances.

2.3 Role of Private Citizens in Enforcement

An additional piece in the U.S. enforcement picture is the role of private citizens, including groups or organizations. In some circumstances, and consistent with U.S. constitutional "standing" principles, many federal environmental laws give private citizens the right to go to court and seek to enforce those laws against violators. Depending on the law, citizens are entitled to seek injunctive relief or civil penalties, payable to the U.S. Treasury.

2.3.1 Relationship of Citizen to Federal Enforcement

When a citizen sues a private violator, and the case concludes through a settlement (not a formal judicial determination), the terms of the settlement are not binding on the federal government. We are still free to bring our own enforcement action on the same violation if we believe the settlement in the citizen's case to be inadequate.

2.3.2 Review of Citizen Enforcement by Federal Government

Under most environmental laws which permit suits by citizens, the federal government must receive notice of the suit 60 days before the citizen can file it in court. This allows federal authorities the opportunity, if they choose, to bring the case instead of the citizen. Moreover, if the citizen does proceed with the case because federal authorities have not filed their own action, federal authorities may "intervene" in (i.e., join) the citizen suit.

Lastly, if federal authorities do not bring the case, and do not intervene in it, they are still entitled to review any proposed final settlement of the case. If they believe that the proposed settlement is not adequate, they will try to persuade the parties to change the terms of the settlement. If this fails, federal authorities may try to persuade the court not to accept the proposed settlement.

At each step along the way, our citizen suit laws are designed with a firm purpose in mind: to allow the federal government to ensure that all environmental enforcement -- even when a private citizen, not government, is the enforcer -- be conducted in as uniform and consistent a manner as possible.

3 U.S. ENVIRONMENTAL ENFORCEMENT PRINCIPLES AND CAPABILITIES

3.1 Administrative, Civil or Criminal

To most Americans, environmental violations are not all equal. Measured according to such standards as harm to the environment or to human health, some are relatively minor. This public perception of a sliding scale of environmental violations -- least to most severe -- has prompted our Congress, typically with the support of the executive branch, to design laws with levels of punishment corresponding to the magnitude of the violation.

Beyond linking the severity of the punishment to the severity of the violation, practical reasons also underlie the sliding scale approach in U.S. law. If administrative sanctions were not available to tackle the vast majority of violations, and our federal courts and federal enforcers were pressed to handle all violations, large or small, the burden on the courts and the government would be immense, and beyond our present capabilities.

Generally, on the bottom end of the scale, the least serious offenses are subject to administrative sanctions only. In the middle are civil judicial sanctions. On the top end, offenses carrying the greatest risks to society and which society deems the most worthy of harsh punishment, such as dangerous illegal acts undertaken knowingly and willfully, are prosecuted as crimes. For individuals, criminal prosecution means one of the stiffest penalties in the U.S. legal system -- the specter of imprisonment. In practice, the vast majority of enforcement actions are administrative. Criminal prosecutions represent the fewest.

3.1.1 Who May be Prosecuted

Not only individuals and companies, including owners and operators of facilities, may be charged with violations of environmental law. Municipalities and other political subdivisions are also subject to enforcement actions.

3.2 Range of Enforcement Actions

Administrative, civil and criminal actions usually carry the following range of sanctions:

- Administrative: orders to comply with law by a specific date which are enforceable in court, and usually the possibility of monetary penalties (law usually sets cap on maximum penalty) (1);
- Civil: monetary penalties (with no maximum level set by law and up to $25,000 per day for each violation), injunctive relief (e.g., orders to comply with environmental law, cease operations), and litigation costs;
- Criminal: monetary penalties (no maximum level set by law and up to $25,000 per day of violation) and, for individuals, imprisonment.

3.2.1 How Civil Penalties are Calculated

The amount of civil monetary penalties a court may impose is usually designed by law (e.g., Clean Water Act, 33 U.S.C. 1319(d)) to reflect several factors:

- Seriousness of the violations;
- Economic benefit resulting from the violation;
- Prior history of such violations;
- Good-faith efforts of defendant to comply with law;
- Economic impact of penalty on the defendant;
- "Such other matters as justice may require".

Executive branch policy statements may also be employed to help determine the penalty amount.

3.2.2 Other Forms of Civil Relief

Beyond monetary penalties, a remedy sometimes available administratively, or under the court's power to issue injunctions, is a so-called "environmental project." Environmental projects are becoming increasingly used to redress environmental violations, and can be ordered in cases brought by the government and in cases brought by private citizens. Generally, there are five categories of projects: pollution prevention and reduction, environmental audits and restoration, and enforcement related public awareness projects. (2) and (3)

An environmental project is an undertaking by the violator to either restore the resource it injured or destroyed, or to preserve the resource from such effects in the future. In any event, a critical requirement is that there be a "nexus," or connection, between the violation and the project. This generally means, at a minimum, two things: the medium polluted must be the medium restored or preserved by the environmental project; and the project must benefit resources affected by the pollution. The following hypothetical case helps illustrate the point:

- Suppose a company admits to discharging illegal amounts of pollution into the headwaters of a river, violating the Clean Water Act. While settlement of that case should entail a substantial monetary penalty to the U.S. Treasury, U.S. law and practice also might permit the company to agree to fund an "environmental project" which replaces fish stocks killed by the discharges. Or, the company might be permitted to buy and preserve wetlands adjoining the river which are downstream of the discharges and were undoubtedly polluted by the discharges. Both environmental projects appear to have a "nexus" to the illegal discharges.

3.2.3 How Criminal Penalties are Calculated

The amount of criminal monetary penalties a court may impose is usually designed by law (e.g., Clean Water Act, 33 U.S.C. 1319(c)) to reflect several factors:

- Whether the violation was "negligent" or "knowing" (defendant subject to $25,000 penalty per day for "negligent" violations, and $50,000 penalty per day for "knowing" violations);
- Whether the violation "knowingly" placed another person "in imminent danger of death or serious bodily injury" (defendant subject to $250,000 penalty per day);
- Guidelines of the U.S. Sentencing Commission.

3.2.4 Other Forms of Criminal Relief

Our criminal laws contain a rough equivalent to civil "environmental projects." Under the principle of "restitution," courts may, as a condition of probation, require that criminals restore the fruits of their crimes. This means that, besides being subject to a monetary penalty and possible imprisonment, the criminal must, as a condition of probation, make restitution for the offense.

3.3 Whether to Prosecute Violator Civilly or Criminally

Civil charges are far more common than criminal charges. For the government to bring criminal charges, compelling circumstances must be present. Among the factors we consider when contemplating bringing criminal charges are the:

- Nature and extent of the harm, or threat of harm, to human health or the environment. The more serious the harm, the more likely criminal prosecution will be justified;
- Violator's history of compliance with the law. A long history of violations may suggest the need for criminal prosecution;
- Violator's degree of cooperation with regulators and law enforcement officials, including full and prompt disclosure of violations and steps taking corrective action;
- Impact of the conduct on our regulatory program. Have records been destroyed or falsified? Since the integrity of our regulatory scheme is heavily dependent on accurate and timely reporting, we take very seriously any reporting violations that undermine our regulatory scheme;
- Deterrent value of prosecution. How likely is it that others in the regulated community will be motivated by learning of this prosecution to stay within the law? Given limited government resources to police environmental crime, deterrence is always a major consideration.

3.4 Prosecutions of Corporate Officials

Many U.S. environmental laws allow for prosecution of "responsible corporate officers." This means that if a high-level company official knew about dangerous conditions, or deliberately closed his or her eyes to such knowledge, and consciously decided to do nothing in his or her power to remove or avoid the dangerous conditions, the official may be subject to criminal prosecution.

3.5 Natural Resource Damage Claims

When it is air, land, water or wildlife that is injured, and that resource or resources belong not to a particular person, but to the public as a whole, traditional civil enforcement methods may fall short. For one thing, exactly who can bring a civil lawsuit for such broad and diffuse damage? For another, how can a price tag be put on, say, the myriad ramifications of a large oil spill? U.S. law has designed a way to deal with large scale environmental damage, while still preserving the twin objectives of all our enforcement -- compensation and deterrence. This is done through natural resource damage claims. Under several of our environmental statutes, natural resource damage claims work as follows:

- The government (national, state or Indian tribe) is made a trustee on behalf of the public. The government then brings an action, for example, against the owner of the ship which spilled large amounts of oil into a bay. When the government recovers funds as a result of the natural resource damage claim, it spends the funds to restore or rehabilitate the injured land, water and wildlife resources.
- As appealing as natural resource damage claims are to address episodes of massive pollution, they do present federal enforcers with considerable challenges. Measuring and assessing environmental damage can be enormously complex. Giving a dollar value to a single dead bird after an oil spill is difficult, much less multiplying this task by hundreds or thousands of times for all affected fish and wildlife species. Add to this task the difficulty of assigning values to water or land, and some idea is had of the challenges facing the government trustee seeking natural resource damages.

3.6 Parallel Civil and Criminal Proceedings

Many U.S. laws authorize both civil and criminal enforcement for the same illegal conduct. This poses potential problems for federal enforcers. If two prosecutions, civil and criminal, go forward simultaneously, investigators and attorneys may begin overlapping one another and

undermining the other case. Therefore, enforcement officials must be careful to avoid duplicative enforcement. Several years ago, EPA and the Department of Justice fashioned policies to deal with such circumstances.

Generally, when both civil and criminal prosecutions are possible for a single pollution incident, a criminal proceeding should be brought and resolved before a civil action. In part, giving priority to the criminal case reflects the fact that criminal penalties are more severe than civil penalties, and violators should face these severe penalties as quickly as possible. However, if danger to public health or the environment is imminent, needing speedy corrective action, a civil proceeding to bring "injunctive" relief may precede the criminal action.

4 STRUCTURE AND PROCEDURES OF U.S. JUDICIAL ENFORCEMENT PROGRAM

4.1 Role of Department of Justice

By federal law, the Department of Justice is the litigating arm of the executive branch of government. Department attorneys thus represent federal agencies in court. Most judicial enforcement of our environmental laws, civil and criminal, is handled by the some 300 attorneys in the Department's Environment and Natural Resources Division, headquartered in Washington, D.C. The Department's ninety-four U.S. Attorney's Offices throughout the nation also enforce environmental laws for violations (particularly criminal ones) within the jurisdiction of the individual Office. When the case is handled by a U.S. Attorney's Office, that Office coordinates its litigation decisions with Environment Division officials in Washington. In this way, we ensure as uniform and consistent an application of environmental laws as possible.

4.2 Relationship of Department of Justice with other Agencies

The critical task of conducting the initial investigation and fact-finding necessary to bring the case is handled by the Department's "client" agencies. These agencies possess the technical expertise to gather evidence and undertake often sophisticated analyses necessary to assess whether environmental violations have occurred. The primary client agency of the Department of Justice on environmental matters is EPA. (4)

Because of the close working relationship between EPA and the Department of Justice, we hold monthly high-level meetings which track the progress of cases, confer on resources and case loads and discuss other policy matters.

When EPA has completed an investigation, and documented environmental violations it believes are serious enough to warrant prosecution in court, (not merely through EPA's own administrative powers), it sends a "referral package," containing all necessary factual information, evidence, proposed case strategy and settlement terms, and its recommendation for prosecuting the case, to the Environment Division of the Department of Justice or the U.S. Attorney's Office. In FY 1991, EPA referred 393 civil judicial cases and 81 criminal cases to the Department of Justice. (During that same period, EPA took 3,925 administrative enforcement actions). (5)

4.3 Considerations for Bringing Judicial Enforcement Actions

Department of Justice attorneys review the referral package from EPA. Attorneys examine the referral package with two main considerations in mind: (1) whether the facts provided constitute a violation of law; (2) whether, even if the facts provided might technically constitute a violation of law, Department policies or other considerations militate against bringing the case, or against bringing it on the grounds recommended by EPA. A hypothetical example illustrates the point:

- The Clean Water Act generally requires that anyone wishing to fill wetlands, such as a swamp, obtain a federal permit before doing so. EPA investigators have learned that a real estate development company has filled in four acres of year-round swamp -- a wetland -- on its property. EPA has also uncovered many additional facts. The company president

knew that a permit was required. He had in fact approached federal officials, but was angry to learn that the permit process would take many months. The president wanted to fill immediately in order to turn the quickest profit. The company also knew, EPA found, that its swamp had particularly valuable ecological values. Company officials had been told by their employees that it was the only remaining swamp in many square miles. Numerous species of migratory birds used the swamp to nest and feed, and the swamp was also vital to help purify the drinking water of nearby residents. Knowing all this, EPA found, the company nevertheless proceeded to fill the swamp to build a parking garage.

- The referral package describing such facts to the Department of Justice would appear to present a good case for prosecution. The case could be civil or, given the apparent open and willful disregard for the law, perhaps even criminal. The land was protected wetland under the Clean Water Act, a permit had not been sought, the land had unusually valuable ecological characteristics and the company openly flouted the law. If Department attorneys were satisfied that such facts would be persuasive to a jury and judge in the judicial district where the swamp was located, and that witnesses, documentary and technical evidence could present a convincing case, the Department might well take the case to court.
- On the other hand, consider one or more somewhat different facts. The swamp was not under water more than a few months each year. The judicial district in which the swamp is located has in the past been a hostile forum to such government actions. In three such earlier cases, either judges or juries found the charged landowner not liable. Mindful of such circumstances, and given the already high demands on Department resources, the Department might decide that its enforcement priorities should be directed to other environmental violations. Thus, while the referral package might possibly establish a violation of the Clean Water Act, other strong considerations might convince the Department to decline to bring this case in court.

4.4 General Enforcement Policies

4.4.1 Publicity

When one facility learns that another facility in the same industry or in the same general area has been prosecuted, the first facility will, in all likelihood, take steps to avoid committing violations of its own. This principle is at the core of an important objective of all enforcement -- deter future violations by making the enforcement a widely known fact. It does little good to prosecute an industry here and an industry there without alerting all industry to the fact that prosecution possibly awaits any who break the law. Government does not have unlimited resources. It gets the most "mileage" from those prosecutions it is able to bring by showing all in the regulated community examples of violators who have been forced to pay substantial monetary penalties or even go to prison. Thus, the federal government often accompanies the filing of administrative, civil and criminal actions by simultaneous, detailed press releases telling the public and the media.

4.4.2 "Multimedia" and Special Enforcement Initiatives

As all know too well, when a waterbody, forest or city is assailed by pollution, that pollution usually comes from more than a single source. Pesticide runoff from farms, and acid rain caused by nearby industry, may both contribute to degradation of a bay. Urban areas are often burdened with combined industrial, automotive and other discharges into air, water and land.

Increasingly, we are using multi-media considerations in priority setting and taking enforcement actions. We are also using special enforcement initiatives to package cases for maximum impact. (6)

For example, recognizing the occasional shortcomings in targeting a particular pollutant in a particular medium, when an entire region suffers from multiple pollution sources, the U.S. has begun to confront environmental damage on a region-wide scale. It does this through "multimedia" enforcement initiatives. As the name suggests, these initiatives may consist of

4.5.6 Assessing the Case

- After a substantial investigation has been completed, does the case still hold up, or should prosecution be declined because the case now looks weaker than it originally did?
- Should certain new charges be added or old charges dropped?
- Have negotiations been attempted as a way to settle the case without going through the time, trouble and risk of having the case decided by a judge?

4.5.7 Having the Court Decide the Case

- If negotiations to settle the entire case fail, can time and effort for all concerned still be saved by settling or eliminating some of the issues to be resolved?

4.5.8 Structuring a Settlement

- If it will take a long time to meet the terms of the agreement, what interim milestones may be established to track performance, and what penalty schedule might be employed in the agreement to set consequences for failure to meet the milestones?

4.5.9 After the Case Concludes

- Assuming the charged violator has been found liable, what penalties should the government recommend? Have all relevant factors required by law and government policy been considered in recommending the penalty?
- If the government loses the case, is there a right to appeal the result to a higher court? If so, should an appeal be taken?

5 EASING THE ENFORCEMENT LOAD ON FEDERAL AUTHORITIES

While enforcement will always be the cornerstone of ensuring compliance with environmental laws and standards, we should not expect that administrative or judicial actions alone are the exclusive means of ensuring environmental compliance. Even if they were, enormous executive and judicial resources necessary to police compliance with environmental laws, particularly in times of budgetary pressures, would take a high toll.

Fortunately, the U.S. has successfully employed certain policy tools to encourage industry to reduce pollution outright, with the additional advantage of saving industry substantial costs along the way. The consequence of less illegal pollution is, of course, less need for federal government enforcement. Moreover, when enforcement is necessary, we are promoting ways to simplify and streamline the judicial process.

5.1 Incentives to Industry to Comply with Regulations

Market-based, economic incentive approaches to environmental compliance are becoming progressively more intertwined with U.S. technology-based command and control regulations. The essential idea is quite simple: give industry the encouragement and flexibility to harness its free-market, creative energies, and it can achieve cost-effective, overall levels of pollution control that equal or exceed command and control results.

To date, air pollution has been the main arena for use of market-based incentives. Under the amended Clean Air Act, EPA has created a market to trade units of allowable emissions. A business can shift emission units among different sources within its plant, so long as the plant does not exceed its overall emission limitations. A new emission source is allowed to open in an area otherwise barring new emissions if the new source obtains more than offsetting decreases in emissions from other sources in the area. This scheme not only can save industry tens of millions

of dollars, it causes no increase in aggregate emission levels. Just such a program of tradeable emission credits has been quite successfully used to phase out lead in gasoline.

Emissions trading is also the heart of the amended Clean Air Act method for controlling emissions of sulfur dioxide, a key precursor of acid precipitation. The Act requires an overall reduction in the amount of sulphur dioxide emitted by U.S. power plants. It then allocates a limited level of emissions to power plants. Utilities that can cost-effectively reduce their emissions below their allocated level can sell the resulting credits to power plants that find it more expensive to reduce emissions to allowable levels. It is estimated that this program will reduce sulphur dioxide emissions by 40 percent over ten years. Anticipated savings are estimated at about $800 million per year over the amount that would be spent on traditional regulatory controls.

A market-based incentive of a somewhat different cast than trading is information disclosure. Here, the incentive to comply is not a government-set pollution level. Rather, the incentive is consumer pressure. If, for example, the public knows that a nearby company has transported or released certain toxic substances from its facility, company sales might well suffer as a result of public alarm. This is precisely the thrust of the 1986 Emergency Planning and Community Right-to-Know Act. 42 U.S.C. 11001. Under that statute, companies are required to divulge the nature and extent of toxic chemical transfers and releases.

5.2 Environmental Audits

Department of Justice policy offers an industry a way to reduce the chances that it will be criminally prosecuted for environmental violations. (7) If an industry will audit and police its own environmental activities, then voluntarily disclose to the government any environmental violations it discovers, the Department will take this cooperative attitude into account when deciding whether to bring a criminal prosecution in a particular matter. More specifically, we ask whether the industry has:

- Made a voluntary, timely and complete disclosure of the matter under investigation;
- Cooperated with the government fully and promptly;
- Taken measures to bring its harmful activities into compliance with the law, and adopted procedures to identify and prevent future noncompliance.

5.3 Simplifying Judicial Enforcement

It is an axiom in the U.S. legal system that it is better to settle a legal dispute than to try the case in court. Taking a case all the way to civil or criminal court is invariably more expensive, time consuming and unpredictable for all concerned than when the parties to the dispute settle the case between themselves. In practice, fortunately, the vast majority of cases settle without the need for a judge or jury decide them.

The U.S. judicial system, and the rules under which it operates, give strong encouragement to settlement of cases. Our federal judges are burdened with many cases, and usually try to do all they can to ensure that parties explore every possible avenue of settlement before proceeding into the courtroom. In practice, settlements between federal authorities and private parties are reached as they are in most other nations -- by means of negotiation. The parties sit at the table and work through their differences toward a mutually agreeable solution.

One new method of relieving the enforcement burden on parties and courts alike is alternative dispute resolution (ADR). A recent law (Administrative Dispute Resolution Act of 1990) encourages disputing parties to employ such techniques as mediation and arbitration. ADR has one great virtue -- it avoids the kind of protracted, expensive litigation that has come to burden the American legal system the past several decades. By easing the time and costs of enforcement, ADR, as any successful negotiation, frees up federal resources to take on wider enforcement responsibilities.

5.4 Curbing Litigation

Litigation in the United States has swollen to such a point that it now exacts exceedingly high costs on our society. Each year, approximately $80 billion is spent by individuals, businesses and governments on direct litigation costs and insurance premiums. Acutely aware of this burden, President Bush recently ordered all federal attorneys to conduct their litigation in ways designed to reduce the time and expense for all litigants. (8) The President ordered attorneys to avail themselves of methods designed to settle cases, to take steps to streamline the often enormously taxing "discovery" process, and to keep "expert" theories out of our courtrooms that are not widely accepted. By employing these and other measures, the President hopes to set an example private attorneys will follow in conducting their own litigation.

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THE PUBLIC PROSECUTOR OFFICE OF HUNGARY AND ITS DEVELOPMENT

SÁNDOR FÜLÖP

Public Prosector Hungary

INTRODUCTION

According to our Constitution, Hungary's Chief Public Prosecutor is elected by the Parliament of Hungary for a six year term on the proposal of the President. The two deputy is appointed by President on the proposal of the Chief Public Prosecutor. The further prosecutors are nominated by the Chief Public Prosecutor. They are working on three levels, following the structure of our court system: the first instance /towns/, the second instance /counties/, and the Chief Public Prosecutor's Office, besides our Supreme Court, actually placed in the same building in Budapest, the Capitol City.

1 THE FUNCTIONS OF THE PUBLIC PROSECUTOR OFFICE

The main functions are delineated in the Constitution itself, under the section 51, and are detailed in the amanded Act V. of 1972, about the Public Prosecutor Office /PPO/. In general, the Chief Public Prosecutor and PPOs protect the civil rights of citizens and consequently prosecute all the offenses that are harmful or perilous for the constitutional order, the safety and independency of the Country. The prosecutor surveys the police investigation or himself investigates, represents the criminal charge side on the courts. The other area of our work is also involved in the Constitution: the prosecutor assists in the law compliance of the organisations and citizens in the country. In the case of noncompliance he is supposed to make legal steps in the protection of legality.

The Act about prosecutors gives more detailes of the function.According to this, there is three main branches of our work: criminal law, civil law and administrative law functions.

1.2 The criminal law function

In our criminal procedure, the Police has an independent role in the investigation. Following the practice of the past decades the investigation has been divided into two parts: the so called operative phase, and the investigation in its narrower sense. The operative phase has not been the subject of the criminal law regulation at all, but it has had some administrative law rules and otherwise has fallen out of the scope of legal supervision. The forthcoming new Police Act is going to change this highly debated situation.

The prosecutorial supervision now actually begins only from the second phase of the investigation, when the Police communicates the so called well founded suspicion to the defendant, allowing him to protect himself and to hire a defence attorney. From this stage the police prepares official records on the investigative steps, and these are open to the prosecutorial supervision. Nevertheless, the supervision has not taken place in all the cases. It is definitely mandatory when the defendant passes a complaint against the communication of the suspicion, when the defendant is under arrest or in the cases of highest importance. The supervision of the police investigation is made through the overview of the files, or accomplishing some investigative actions, such as the survey or hearing witnesses. One of the strongest tools of the supervision is the supplementary investigation. The prosecutor may order it if the facts of the case have not been discovered properly or the rules of procedure have been violated in a way considerably imparing the settlement of the case. In the evaluation of the work of a policeman the supplementary investigation represents a bad trait, so he tries to avoid it by frequent consultation with the prosecutor on the evidence or legal matter of the cases. There are some crimes, such as the

offences against adminstration of justice or crimes committed by or against policemen, which are totally investigated by the PPO. In the draft of the New Crimninal Procedure Act it is proposed to bring to this group of crimes the environmental crimes, too, because their investigation requires special expertise and they are often difficult from legal side as well.

When the investigation is finished, the prosecutor examines the records coming from the Police /in the overwelming majority of the cases/ and may prepare the indictment. This phase of the criminal procedure is a clearly prosecutorial one, where he is the only decision making official. The prosecutor fulfills here the filter role, not leaving inproper cases to go further to the court. So he can order a supplementary investigation, and he can suspend the investigation or even can abandon it, too. It does not mean that we have a discretionary right, because the Hungarian criminal procedure accepts the principle of legality, that is every case has to be passed with an indictment, only the obstacles of punishability can exclude it, or the case where the suspect cannot be identified and no result may be expected from the continued procedure.

On the trial stage of the criminal procedure, the judge, as the president of the division, shall conduct the evidence process, striving to clarify the material truth. In the continental criminal procedure system the prosecutor and the defence attorneys have less deciding role in the court proving process as in the clearly adversial systems. Nevertheless the prosecutor could have a deciding role in a mainly negative way: the withdrawal and the modi£ication of the charge binds the court.

Our prosecutors have not any bargaining position with the defendants. After the sentencing phase the function of the prosecutor in the criminal process is to supervise the due accomplishing of the imprisonments or other punishments.

1.3 The civil law function

In general the Act about prosecutor says under the section 4, par /2/, point e./, that the prosecutor takes part in the maintaining of the due process in the Civil Procedures. The amanded Act II. of 1952, under the section 2/A gives the rights to the Public Prosecutor to institute a lawsuit out of important state or social interest, or if the person entitled thereto is for any reason unable to defend his rights; he may also take action in any phase of the lawsuit in the interest of observing legality. In the course of taking action in a lawsuit and in a lawsuit instituted by the prosecutor he shall be entitled to all rights which are due to a party in a lawsuit: but he may not come to terms of arrangement, may not waive rights, may not acknowledge rights respectively. Although this function was given to the PPO in the last political regime with a quite different purpose, it seems to be tailored to the tasks of the environmental protection, where there is always a strong social interest, and the entitled persons usually are not in the position that enables them to defend their rights, and even the exact circle of the plaintiffs can not be defined easily. Using the famous section 2/A, the prosecutor could solve one of the main problem in our recent early environmental cases, the question of the capacity to sue. I have to add to this survey of the funtions of the PPO that it is not in practice yet to begin civil law cases in the name of a concerned community. although the legal possibilities are given in a fortunate legal situation.

1.4 The administrative law function

The third branch of our funtion is, as usually called "the general supervision" that is the overview of the processes and the administrative law and labour law decisions in the centralised state organisations, municipialities, and other organisations /associations etc./ of the society. This function has been very popular, the citizens has turned to the PPOs with several complaints about administrative law decisions, and the PPOs themselves have run regularly preplanned supervision programs at the several organisations. In the vaste amount of cases the administrative law prosecutor can solve the legal problems by advising proper legal steps or clarifying the legal situation itself. If it is not enough for the maintaining the due process, he can warn the leaders of the concerned organisation, or ask for further data, or an inward survey. The storngest tool of the administrative law supervision is the protest on legal ground against an enforcable decision. The PPO could propose in his paper the suspending of the execution, too. If

the organisation does not agree with the protest, it has to pass it to its superior organisation. The confrontation takes place rarely, our administrative law prosecutors have extremely broad connection system in the whole range of the administrative organisation, and this PPO function is widely accepted and appreciated. Yet, the administrative law function together the civil law one seems to lose its position in comparison with the criminal law functions. On the theoretical level many experts object the maintaining of the previous regime's overal legal supervisor organisation. Others agree that in the new democratic political system there has to be balances against the governmental power. They say, that together with the President, the Ombudsmans /not elected yet/, the Constitutional Court and even the free Press, the PPO can be one element of this balance system through its civil and administrative functions, too. Without wanting to decide the theoretical and political debate, I could insist on the meaintaining the "not only criminal law" prosecutional system, from the special viewpoint of handling of the environmental cases.

2 WHY IT IS CRUCIAL TO HAVE THE POSSIBILITIES FOR THE PARALELL PROCESSES?

According to the centuries old practice, our continental criminal law can not handle the enterprises, associations, etc, as to whom criminal liability is imputable. This point can make extremely difficult to use the criminal liability for the so called corporate committed environmental crimes, because the decisionmaking structure in a big corporation can be so sophisticated, that it is almost impossible to find the responsible persons. But once you have found them, and let us say punished them strongly, the corporation probably will continue its environmentally harmful practice just with an other management. Naturally the criminal procedure can leave a message to the new staff, but the economic enticement for the noncompliance could be enormous, and the new leadership can put their hopes to the reorganisation of an extremely deceiving decision-making structure. It seems to be the only succesful environmental enforcement solution to begin a strong civil law case against the firm in the same time with the criminnal one. The coordinated fight against the wanton noncompliant, big sized corporation requires a law enforcement organisation with authorities in the field of criminal, and civil law as well. As far as the environmental noncompliance cases usually have their previous history in the administrative law enforcement, it is also useful if the organisation in issue has a certain adminstrative law input, too. The only organisation which fits to this requirements is the PPO, in its recent form.

3 THE STAFF OF THE PPO

According to the functions, our staff is divided to criminal, civil and administrative law departments. Out of the roughly 1000 prosecutors in the Country, there is not more than 200 prosecutors on the charge of the civil and administrative law cases. Their number used to be more than one third of the whole, and is diminishing continually. They are uncertain about the future of their deparments because of the strong plans of "clarifying the profile" of the PPO, although there is not any definite decision yet concerning their position. The retaining of these highly experienced and professional administrative lawyers is essential from the viewpoint of the environmental enforcement. They will not be easily superseded later by other administrative lawyers, because this work in the PPOs needs a special experiance and training. The losing of the adminstrative law staff is specially painful because of their widespread connections towards the several levels of the administrative system. It seems to be urgent to make clear for them that they have a sound future in the PPOs, as environmental protecting specialists, amongst other important tasks.

Besides. the criminal law staff has also very important specialities useful to the environmental enforcement. Being the largest part of the PPO, their departments are divided to several subdivisions, as the investigation supervision, the representation of the charge at the courts, the supervision of the accomplishing of punishments, juvenile delinquency cases, traffic crime cases and some others. The separation of tasks are more definite on the level of the Chief

Public Prosecution Office, and the bigger County Prosecutor Offices, and less definite on the local level. Because of the specialisation, our criminal lawyers have advances in comparison with other professionals. The criminal law staff also has a good possibility to build up good work connections towards the Police which , as it was seen, tends to use the prosecutor's technical and legal advises frequently.

4 TRAINING

The Hungarian educational system does not contain colleges, but after the secondary school, the students can go to universities immediately. The Law School takes four and half years, and the graduated can look after jobs in Courts, PPOs, Private Attorneys' or elsewhere. After at least two and half years practice and further learning he/she passes the bar exam, and gain his/her appointment as judge, prosecutor, etc. The PPOs put stress on the high level training in their postgraduation system. The future prosecutor visits all the departments on the first and second instances in the PPOs. Their workload is nearly equally divided between the learning the law materials of the Bar Exam, and resolving practical legal problems in the cases. There is nearly 150 young colleagues on legal Practice at PPOs, and taking the avarage three years period before their exam, it means at least 50 appointments of new prosecutors per year. This number is hardly enough to fulfill the positions in our offices becouse the state salary never can compete with the private firms offers, and a couple of years practice in the PPOs is a good background for getting a job in the private sector.

5 THE CONSTITUTIONAL POSITION OF THE PPO

In the short introduction of the PPO of Hungary, I could not avoid to mention this highly debated issue. Although the theoretical opinion tends to decline to that direction that PPO has to belong to the Government and to the Department of Justice, the recent situation is different. There is an independent PPO in our system, and only the Parliament excercises the right of the controll over the PPO through the person of the Chief Public Prosecutor. This independency can cause some difficulties, too. Because of being a politically neutral organisation, the PPO in the Parliament in the most of cases can not gain any aim from any parties, and even it means frequently an easy victory for a party to challange the Chief Public Prosecutor, who tends to lose the final votings. On the other side in the civil life, and from the Press, the PPO gets better and better appreciation, sometimes only from the reason of being independent from the government. In reality the PPO is trying to avoid any confrontation with any political problem, and restricts itself to the legal issues in the strictest sense. Oterwise there is little possibility for the change in our highly debated constitutional position because of the need for a two-third majority in the Parliament for any amandments in the Constitution. The leader parties have only a simple majority, and the opposite parties are consequently objecting of bringing the PPO under the Government.

6 POSSIBILITIES OF A BROADER PARTICIPATION OF THE PPO IN THE ENVIRONMENTAL LAW ENFORCEMENT

As we could see, the PPO has got in a paradox situation: in the ever changing political situation it is remaining unchanged. Yet we are experiencing that the stress in our work is shifting to the criminal law side, and we are losing our best civil and administrative law experts. I have tried to clarify that even in this recent situation the PPO has a fortunate position for becoming the key organisation in the environmental law enforcement. We could undertake the task of the developing sound, paralell cases against the environmentally noncompliant big sized corporations, too. On the other side, this undertaking could provide an opportonity to retain many of the non criminal law experts, offering them a long run, valuable prospect.

Finally I have to call attention to a basic difference between the operation of the legal programs in Central Europe and in America or Western Europe. It has definite historical basis that in our region nobody can accomplish a legal program unless determines its structural details, not only the material ones. Here is not enough to delineate the aim of an Act and to set out the legal orders and prohibitions. We have to build up or point out the executive structure, with an exact hierarchy in the decisionmaking, with the . . elements of the process and with the deadlines. And that is the very problem in our Environmental Enforcement. Since 1976 we have had a first class Environmental Legal System, which has reached the world standards in itself. But the responsibilities for the execution are not clearcut enough, and in reality Hungary's environmental status is deteriorating with high speed. The civil law and criminal law enforcement are missing totally, because of lack of any departments in the Police and PPO, lack of a legal practice of the beginning and developing the cases. The draft of the new overall environmental code has to pay more attention to the structural side of the enforcement, and has to give definite authorities to the Police and PPO as well. The leadership and the staff of PPO have commitment to this work, and the Public, the NGOs have been urging us to get more involved in the environmental law enforcement.

I would like to thank for his professional advises to Mr. Steghen Stec. our CEELI liason. Special thanks to Mrs. Erzsebet Kazsmer and Ms Judit Hornung for their indispensable technical assistance.

DEVELOPING EFFECTIVE ENFORCEMENT PROGRAMS AT THE STATE LEVEL

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1 THE CONTEXT

The federal nature of the political system, the size of the country, the number of regulated facilities and the pervasiveness of environmental regulations all dictate that the states play a central role in environmental programs in the United States. (1,2) Congress has delegated the implementation and enforcement of most federal environmental laws to states. (2,3) In addition, states have adopted their own environmental laws which, in some cases, are much more comprehensive than federal environmental laws. Because of the important role of states in the environmental programs in the United States, the experience of states may be useful to other countries in designing their environmental enforcement programs.

This paper focuses on the development of environmental enforcement programs in the State of Minnesota. Minnesota is a mid-sized state with a land area of 218,600 square kilometers and a population of about 4,200,000. The State's economy is based on technology, light industry, agriculture, tourism and timber. There is some mining and oil refining but otherwise little heavy industry. Minnesota consistently has been one of the most innovative states over the past 25 years in addressing environmental problems. It was among the first states to authorize citizens to initiate lawsuits to prevent pollution of the environment, to enact a state hazardous waste disposal site cleanup (Superfund) law, and to require companies to undertake pollution prevention planning. Minnesota was the first state in the United States to adopt an acid deposition standard.

Until the mid-1980s, both national and state environmental programs tended to focus on discharges from larger industrial facilities and on publicly-owned sewage treatment works. The number of regulated facilities was relatively small numbering in the tens of thousands nationally and in the thousands in Minnesota. (4,5) Beginning in 1986 with the expansion of hazardous waste regulations to small quantity generators (those who generate between 100 and 1,000 kilograms of hazardous waste in a month), the number of regulated facilities in the United States and in Minnesota dramatically increased. The scale of the enforcement problem is demonstrated by the number of facilities now subject to environmental regulation in Minnesota. There are nearly 20,000 small quantity hazardous waste generators, 33,000 regulated underground storage tanks, more than 10,000 facilities subject to community right-to- know reporting requirements, 6,000 infectious waste generators and in excess of 17,000 regulated public drinking water supplies. (8,9)

In addition, thousands of other facilities are subject to toxic water pollution requirements under the Clean Water Act and hazardous air pollutant and chlorofluorocarbon restrictions under the Clean Air Act. Finally, thousands of companies and individuals are affected by bans on landfill disposal of waste tires, lead-acid and nickel-cadmium batteries, old appliances and waste oil. In total, far more than 100,000 facilities are now covered by environmental laws in Minnesota. (4,5) Many of these are small businesses and government facilities.

Enforcement programs in most states were originally designed to deal with the relatively small number of larger facilities that were the focus of the environmental regulation in the 1970s. Enforcement authority tended to be centralized in a single state agency and the range of enforcement tools was usually limited. The two primary enforcement tools were notices of violation (warning letters) and civil judicial enforcement involving penalties and injunctive orders that could be imposed by a court. While this approach to enforcement may have been adequate in the 1970s and early 1980s, it has proved to be inadequate in the context of rapidly expanding environmental programs in the late 1980s. For example, an audit of environmental enforcement programs in Minnesota conducted in 1990 found that the centralized inspection staff of the state hazardous waste regulatory office would be able to inspect small quantity hazardous waste generators (drycleaners, automobile repair shops, printers, etc.) once every 100 to 300 years. (6) The same audit also found that notices of violation were often an ineffective tool in gaining compliance with environmental laws

and that civil judicial enforcement was too time consuming and expensive to address the large number of violations in the state. (6)

2 OBJECTIVES IN REDESIGNING MINNESOTA'S ENFORCEMENT SYSTEM

The rapid expansion of environmental programs, the limited number of enforcement tools available to governmental officials and the limited financial and personnel resources available for environmental enforcement necessitated substantial reforms in the enforcement system in Minnesota. To build a more effective and more efficient system, several steps had to be taken. These included expansion in the range of enforcement tools, introduction of enforcement techniques that would more effectively deter violations, increased reliance on a team approach to enforcement, expansion of the universe of regulators, increased enforcement funding and promotion of voluntary compliance. The actions initiated by the Minnesota Attorney General's Office and the Minnesota Pollution Control Agency in the period of 1987-92 to meet these objectives are discussed below.

2.1 Expansion of Enforcement Tools

The principle focus of reform efforts has been on the expansion of enforcement tools available to regulators. Several new enforcement tools have been authorized by the legislature since 1987 including field citations, administrative penalty orders and criminal enforcement. The expanded range of tools permits regulators to more closely tailor enforcement actions to the nature of the violation. Tools such as field citations and administrative penalty orders minimize the procedural requirements that are needed prior to assessing a penalty thereby allowing enforcement officials to handle a much higher volume of cases. At the other end of the spectrum, criminal cases are expected to deter serious violations. Thus, while the criminal cases may require more time and effort to prosecute, they are seen as a cost effective part of an overall enforcement strategy.

2.1.1 Field Citations

Field citations are enforcement documents issued by inspectors in the field, just as a police officer might issue a traffic ticket. Field citations are typically used to address clear-cut violations, requiring the violator to correct the violation and pay a small penalty. The administrative appeal process is usually simplified to avoid long legal proceedings. (1)

Minnesota is using field citations in a two-year pilot project to try to deal more effectively with illegal disposal of used appliances, waste tires and batteries and refuse along roadsides and in state parks. Under the program, staff from the state's Pollution Control Agency (the state's principle environmental regulatory agency) and Department of Natural Resources (the agency that manages state parks and regulates hunting and fishing) are authorized to issue field citations based on the fine schedule set out in Table 1.

TABLE 1
Field Citations Fine Schedule

Appliances	-	$ 100 per appliance up to a maximum of $ 2,000
Waste tires	-	$ 25 per tire up to a maximum of $ 2,000
Lead acid batteries	-	$ 25 per battery up to a maximum of $ 2,000
Other refuse	-	$ 1 per pound of $ 20 per cubic foot up to a maximum of $ 2,000

An expedited hearing before an administrative law judge is the only method for challenging

a field citation.

Experience in the first five months using field citations has begun to demonstrate that they can be an effective tool in addressing smaller environmental violations. Thirty-nine citations averaging slightly over $100 were issued during this period. A significant increase in the number of citations is expected as enforcement personnel become more familiar with the citations process.

Should the field citations pilot project prove successful, the program will likely be expanded to other minor violations of state environmental laws. In addition, local law enforcement agencies that deal with solid waste disposal problems have expressed interest in the field citations program because it may be more efficient than the misdemeanor criminal (maximum jail term of 90 days and maximum fine of $700) sanctions that are currently used by local law enforcement officials to deal with these violations. The burden of proof is higher for the government in criminal proceedings and if a misdemeanor citation is challenged, the court procedure typically is much more time consuming and expensive than an appeal of a civil field citation.

2.1.2 Administrative Penalty Orders

Administrative penalty order (APO) authority allows an administrative agency (rather than a court) to order violations to be corrected and to assess civil penalties. Typically, the penalty order may be appealed either to an administrative law judge or to a court. The U.S. Environmental Protection Agency has used APOs in some of its programs for several years. The maximum penalty that may be assessed in an APO is usually significantly lower than the maximum penalty that could be imposed by a court. The tradeoff is that an APO frequently takes far less time to prepare than a civil case filing and the appeal from an APO often involves an expedited process. APOs are normally issued by a central or regional office of an environmental agency rather than by an inspector as in the case of field citations. About 30 states now have authority to issue APOs.

In Minnesota, APO authority was first granted to the Pollution Control Agency's hazardous waste program in 1987. The use of APOs proved very successful in returning hazardous waste violators to compliance. (6) Because APO's in Minnesota were designed to substituted for the use of notices of violation (NOVs) in many cases, penalties assessed for violations that are not repeat or serious violations are forgivable if the violator corrects the violation within 30 days. During the first three years of issuing APOs, the number of NOVs issued by the Pollution Control Agency dramatically decreased (6), while the number of APOs has increased to close to 100 per year. The forgivable feature of Minnesota's APO law has been controversial. Some feel the approach gives violators one free violation. Others feel that the use of forgivable orders as a substitute for NOVs (which do not include any threat of penalties) is a more effective way of achieving compliance with environmental requirements.

The ceiling for penalties in APOs in Minnesota is $10,000. The ceiling in other states and under the federal law is often higher. Under the Clean Air Act, for example, the maximum penalty that can be assessed by the U.S. EPA Administrator is $200,000. The ceiling for APOs in Minnesota was based on the time necessary to negotiate settlements of civil enforcement actions. An analysis of enforcement actions indicated that almost no penalties were being assessed for violations that would warrant penalties of $10,000 or less because the time needed to negotiate a settlement of a potential civil enforcement case was too great. The result was that, prior to 1987, only NOVs were issued for less serious violations. In Minnesota and most other states, civil enforcement cases are usually settled before a civil court action is actually filed. These settlements are referred to as stipulation agreements or consent orders.

A summary of the use of administrative penalties under Minnesota's hazardous waste program is set out in Table 2.

TABLE 2
Hazardous Waste Administrative Penalties 1/1/88-4/8/92

Total APOs issued	232
Percentage with forgivable penalties	76%
Average penalty	$2,562
Average nonforgivable penalties	$5,353

Based on the experience with APOs under the hazardous waste program, the legislature in 1991 extended the authority to issue APOs to any violations of programs administered by the Minnesota Pollution Control Agency. Appeals from APOs are heard before an administrative law judge or in state court. Fewer than five percent of the APOs issued in Minnesota are appealed and only one has been appealed to district court. The use of APOs has allowed the Pollution Control Agency to initiate far more formal enforcement actions at far less cost and using much less staff time for each case than the previous approach of relying on settlements of potential civil judicial cases.

2.1.3 Criminal Enforcement

While state and federal environmental statutes have included criminal sanctions for several years, criminal enforcement was not utilized extensively until the mid-1980s. Criminal enforcement became more prominent for several reasons. First, it was becoming clear that some companies viewed civil penalties simply as a cost of doing business, refusing to change underlying practices that violated the law. (5,8) Second, because of the high cost of dispcsing of hazardous waste, some traditional "criminals" became involved in the hazardous waste disposal business. Third, public views changed making some environmental violations such as disposal of hazardous waste so socially unacceptable that legislatures adopted criminal statutes to help prevent the activity. Over 30 states have adopted felony (a felony is a crime punishable by more than one year in prison) criminal statutes for illegal disposal of hazardous waste. Finally, the large number of regulated facilities necessitated the use of enforcement tools such as criminal prosecution that could effectively deter some of the most egregious environmental violations. (5,8)

Minnesota adopted its first environmental felony law in 1983. That law covered illegal disposal of hazardous waste. The law was expanded significantly in 1987 to cover illegal storage, transfer, treatment, transportation and disposal of hazardous waste. In 1990 and 1991, additional crimes were added for failure to report spills of hazardous substances, submitting false statements, discharges of air or water toxics in excess of limits established in a permit, illegal disposal of medical waste, and disposal of solid waste at an unauthorized location in
return for a financial benefit. The Minnesota environmental crimes are set out in appendix A. Criminal enforcement is now one of the routine options considered in enforcement cases where a person is believed to have knowingly violated the environmental regulations covered by the criminal law. Even though less than five percent of all enforcement actions will be criminal cases, the cases are increasingly seen as an important part of the overall enforcement program.

2.2 Deterrence

Because of the rapid increase in the number of regulated facilities beginning in the late 1980s, techniques that not only punished individual violators (specific deterrence) but deterred others from violating environmental laws (general deterrence) became increasingly important. (7) In Minnesota, general deterrence efforts have been focused in three areas: targeting industries or geographic areas of particular concern, better communication about enforcement actions and increased use of criminal enforcement.

2.2.1 Targeting

Targeting of specific industries, pollutants or geographic areas can be an effective method of deterring violations beyond the specific cases developed as part of a targeted enforcement initiative. (1, 7) Minnesota has worked with several states in the central part of the country on two initiatives that involve both geographic and industry targeting. The first effort involved used oil facilities. Several facilities in four states were targeted for simultaneous inspection and sampling to determine whether hazardous wastes were being illegally mixed with used oil.

The second effort involves the coordinated filing of several enforcement actions against hazardous waste transporters in six states. Hazardous waste transporters have been the subject of isolated criminal enforcement actions in several states, but hazardous waste transporters had not been a priority for inspections or enforcement actions. The purpose of the targeted action is to establish a strong enforcement presence among hazardous waste transporters in the central part of the United States to deter illegal conduct.

2.2.2 Communicating about Enforcement Actions

Enforcement actions against individual companies can be leveraged to generally deter environmental violations by better publicizing the enforcement actions. Over the past two years, the state has increased efforts to regularly inform the print and electronic media through press releases and press conferences about key enforcement actions. The media in Minnesota is particularly interested in environmental crimes cases.

A second vehicle for achieving general deterrence through communications about enforcement actions is through newsletters directed to regulated facilities. The Pollution Control Agency publishes newsletters for facilities subject to solid waste, hazardous waste and underground storage tank regulations. The Agency staff is currently considering increasing the coverage of enforcement actions in these publications to increase the impact of the cases.

One of the key elements in designing the hazardous waste transporter initiative discussed earlier was communication about enforcement actions to achieve general deterrence results. Several cases will be filed simultaneously to help garner regional press coverage. The participating states also hope that the initiative will be significant enough that the transportation trade publications will write about the enforcement actions.

Finally, one interesting development in the Minnesota has been the publication of environmental newsletters by corporate law firms. These newsletters often highlight important enforcement cases, thereby enhancing the deterrent effect of the cases.

2.2.3 Criminal Enforcement

Criminal enforcement of environmental laws appear to be particularly effective in generally deterring violations. As one commentator noted:

> *"The deterrent effect of the environmental statutes is enhanced . . . if responsible individuals within the corporation know that they may not sanction or participate in illegal activities without subjecting themselves personally to the possibility of substantial fines and/or imprisonment." (8)*

Although Minnesota has not attempted to measure the general deterrent effect of environmental crimes cases, experience over the last five years indicates that the effect is significant. Perhaps the best indication that criminal enforcement has a general deterrent effect is the large number of seminars for corporate officials that are now being offered on the issue of environmental crimes and the increasing coverage of environmental crimes issues in trade and legal journals. This trend was particularly noticeable in Minnesota shortly after the state concluded a high profile criminal case against a large manufacturing company that employed over 3,000 people in a rural area of the state.

2.3 Enforcement Teams

Criminal enforcement of environmental laws often involves the expertise and resources of several governmental agencies. Because of the technical nature of the violations and the relatively small number of cases, it is difficult for state and local agencies to assign staff to do environmental crimes work on a full-time basis. Further, it is difficult to marshall these resources on an ad hoc basis. To address this problem, the Attorney General's Office in 1989 created an interagency "Environmental Crimes Team" (E-Team).

The E-Team is made up of two attorneys and two investigators from the Attorney General's Office, personnel from the Minnesota Pollution Control Agency who conduct inspections and provide technical support, a representative from the Department of Transportation (the Department of Transportation is responsible for regulating hazardous waste transporters), a representative of the Department of Agriculture (the Department of Agriculture regulates pesticides) and representatives from the Department of Natural Resources which has over 170 conservation officers throughout the state and the capability to do aerial surveillance with light aircraft.

The mission of the E-Team is to provide centralized support services for the investigation and prosecution of environmental crimes cases statewide. The E-Team serves as an investigatory resource for, and provides technical assistance to local prosecutors who are interested in handling environmental crimes cases. Prosecutors from the Attorney General's Office are available to prosecute cases if a local prosecutor chooses not to handle a case. The E-Team also is responsible for training state agency staff and local environmental and law enforcement staff (including local police officers) about criminal enforcement issues. Finally, the Team works with federal officials to help coordinate federal and state criminal enforcement activities in Minnesota.

The E-Team has proved to be a critical part of Minnesota's environmental crimes enforcement effort.

2.4 Expanding the Universe of Regulators

One of the ways of responding to the rapid increase in the number of regulated facilities is to expand the number of enforcement personnel. Tight budgets in most states in the United States, however, have precluded significant expansion of state enforcement personnel. One method of addressing this problem is to involve personnel from other agencies or units of government who traditionally have not been directly involved in environmental enforcement activities. (1,9) This approach will only succeed, of course, if the other agencies or units of government see clear benefits from their involvement.

The field citations program discussed earlier is an example of expanding the universe of regulators. Under the pilot program, Department of Natural Resources conservation officers are among the persons authorized to issue citations. While these conservations officers had some involvement with enforcement of solid waste disposal laws in state parks and forests prior to the creation of the field citation program, the new program provides a much more effective and efficient tool for these conservation officers. As a result, the officers are more interested in solid waste enforcement. The involvement of the 170 conservation officers in the state will greatly expand the personnel who are enforcing solid waste violations in the state.

A second major initiative to expand the universe of regulators is a study of the role local units of government could play in environmental enforcement. The Dutch government is a leader in developing local governmental environmental enforcement capability. (10). Based on this model, Minnesota is now assessing which enforcement programs could be most effectively enforced at the local level and what resources are needed to support local governmental enforcement. (1,11) Local units of government could be involved in enforcement-related activities in several ways including observing and reporting violations, educating regulated facilities, assisting state officials with enforcement actions, permitting facilities and directly bringing enforcement actions.

The study is examining 16 programs to assess whether local governmental units could assume a greater role in administering these programs. A set of 12 factors are being used to analyze whether greater local involvement would be appropriate. A list of the programs being examined and the evaluation factors are attached as appendix B. The final report from the study is to be submitted

to the state legislature in November 1992.

2.5 Expanding Financial Resources

Enforcement funding in Minnesota and in most other states has not increased nearly as rapidly as the enforcement workload has expanded. (4,6) Finding new sources of funding, therefore, is important to the success of enforcement programs. This new funding is coming from two principle sources: fees and penalties.

Over the past five years, the reliance on permit, license and emission fees to support environmental programs including enforcement has increased a great deal. (5,6) At the national level, the best example of the use of fees is the Clean Air Act which requires states to impose a $25 fee for each ton of emissions to support the state air pollution control programs including enforcement. Minnesota also places significant fees on the sale of pesticides and fertilizers, hazardous waste generators, underground storage tanks and facilities that release hazardous substances into the environment, a portion of which is used for enforcement. The increased use of fees reflects a greater emphasis on a "polluter-pays" philosophy, as well as the need to look to other sources of funding as state budgets have become tighter over the past few years.

A second approach to increasing enforcement funding that Minnesota has pursued is the dedication of a percentage of the funds collected as penalties to additional enforcement activities. The Environmental Enforcement Act of 1991 appropriates about $700,000 to the Attorney General's Office, the Pollution Control Agency and the Department of Natural Resources for environmental enforcement activities. The $700,000 is about one-half of the expected annual environmental enforcement penalties for fiscal year 1992.

The use of penalties to support enforcement programs was controversial. Some opponents asserted that the use of penalties for funding enforcement would encourage the imposition of excessive penalties. The legislation protected against this result by dedicating only about half of the penalties expected to be assessed in a year to enforcement. In addition, the legislature appropriated the funds to the agencies based on specific budgets submitted by the agencies. Using penalties to support enforcement is a growing trend in the United States.

3 INCREASING VOLUNTARY COMPLIANCE

Voluntary compliance has always been critical to the success of environmental programs in the United States. However, because of the rapid expansion in the number of regulated facilities, voluntary compliance is even more crucial now. The state is promoting voluntary compliance in several ways. The first is through education of persons subject to environmental regulations. The Pollution Control Agency conducts workshops, distributes newsletters and prepares regulatory fact sheets in connection with many of its programs. Unfortunately, while many people subject to regulation feel these efforts are a key to increasing compliance, these programs tend to be underemphasized and underfunded.

Another approach to increasing voluntary compliance is through providing technical assistance to businesses. Minnesota is among the national leaders in providing technical assistance to facilities to help them minimize emissions and reduce waste generation. The Minnesota Technical Assistance Program (MnTAP) was created in the early 1980s and operates through the University of Minnesota. MnTAP's original emphasis was on hazardous waste issues, but it now focuses on a broad range of pollution problems. To help maintain credibility with industries it works with, MnTAP is not part of the Minnesota Pollution Control Agency, the state's environmental regulatory agency. Part of the funding for MnTAP comes from emissions fees.

The Attorney General's Office is working on two new programs to promote voluntary compliance. The first is a pilot program to train managers of small and medium-sized businesses on how to develop and implement better environmental management systems for their companies. The Dutch government, as part of their National Environmental Policy Plan, is promoting the development of environmental management programs by businesses in the Netherlands. (10) These programs include the adoption of company environmental policies, compliance and emissions reduction goals,

internal monitoring and reporting procedures, internal training programs and periodic auditing of the system. (10) Many large companies in the United States have adopted systems of this type. The pilot project is designed to build on the Dutch concept and the experience of larger U.S. companies to help small and medium-sized companies improve their environmental management programs.

Finally, Minnesota is beginning to assess how its enforcement policies can be best designed to promote voluntary compliance with environmental laws and to promote emissions reductions. Issues that will be part of this assessment include the structure of penalty policies, the use of information obtained from environmental audits conducted by businesses in enforcement actions, and the issue of whether companies who have committed to programs that achieve environmental results well beyond what the law requires should be dealt with differently in an enforcement proceeding than companies that has not made such a commitment.

4 CONCLUSION

The rapid increase in the number of regulated facilities in Minnesota has required a dramatic redesign of the environmental enforcement system in a period of only five years. Results are not yet in for all of the initiatives, but early indications are that the reforms have produced a more efficient and more effective enforcement program.

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APPENDIX A

Minnesota Environmental Crimes

Crime		
Illegal disposal of hazardous waste	5 years	$50,000
Illegal storage, treatment, transportation or transfer of hazardous waste	3 years	$25,000
Discharge of a toxic water pollutant in violation of a permit limit	3 years	$50,000/per day of violation
Illegal sewering of a hazardous substance	3 years	$50,000/per day of violation
False statements	2 years	$25,000
Illegal disposal of infectious waste	1 year	$10,000
Failure to report spills of hazardous substances	2 years	$25,000
Discharge of a hazardous air pollutant in violation of a permit limit	3 years	$50,000/per day of violation
Disposal of solid waste at an unauthorized location	1 year	$15,000

APPENDIX B

Local Government Study

MPCA Programs/Activities forpotential local delegation

- Hazardous waste generator education
- Complaint investigation and resolution
- Open burning
- Storm water permits for industrial uses and construction sites
- Pretreatment permits for industrial facilities
- Used tire management and enforcement
- Permits prior to construction
- Special waste management (batteries, lamps, etc.)
- Used oil compliance and enforcement
- Nuisance complaints (odor, dust, litter, etc.) and support
- Underground disposal (e.g., community independent septic systems)
- Permits for very small quantity generators of hazardous waste
- Coordination for small volumes of hazardous waste
- Feedlots
- Municipal sludge disposal management and permits
- Industrial permits (Federal and State Pollution Discharge Elimination Systems)

EVALUATION FACTORS

- Number of facilities
- Importance of access to the regulator
- Interest of the local government
- Size of the local government
- Capacity of the local government
- Need for local government to design a special program
- Amount of state oversight needed
- Legal issues involved
- Expertise required
- Availability of training
- Availability of funding
- Relationship to existing programs

SYSTEM TO SUPERVISE ENVIRONMENTAL DUTIES AND TO PURSUIT INFRINGEMENTS TAKING CLEAN AIR MANAGEMENT AS EXAMPLE

PROFESSOR DR.-ING. MANFRED PÜTZ, Ministerialdirigent

1 THE LEGAL SYSTEM OF IMMISSION CONTROL IN GERMANY

The Federal Republic of Germany is a federal state and consists of 16 states ("Länder") itself. The Federal parliament possesses the legislative power, as far as the Constitution ("Grundgesetz") does not concede the right for legislation to the states ("Länder").

The environmental laws, belongs to the competing legislation in the Federal Rep. of Germany. In order to establish rules which are valid within the whole Federation, the federal parliament ("Bundestag") has used its rights and has proclaimed, inter alia, the "Federal Immission Control Act" (FICA).

It is the purpose of the Federal Immission Control Act to protect human beings, animals and plants, water, the atmosphere as well as cultural assets and other material goods against harmful effects on the environment.

The provisions of this Act shall especially apply to the establishment and operation of industrial installations. Furthermore the Act contents requirements on the nature of installations and chemical or technical products.

At least the Act contents special regulations concerning instruments protecting certain areas.

Industrial installations shall be established and operated in such a way that harmful effects on the environment are be prevented. According to installations not subject to licensing the requirements given by the Act and the ordinances issued hereunder are similar but less strictly.

2 ORGANIZATION AND STAFFING IN NORTHRHINE-WESTFALIA (NRW)

2.1 Legal framework of supervision

Environmental legislation of supervision operators duties, given by the environmental legislation are the first step to reach environmental protection. But as important as these duties is the supervision by the authorities.

I would like to give you an introduction which instruments by law are given to the competent authority.

2.1.1 Article 52 Federal Immission Control Act (FICA)

According to Art. 52 FICA the competent authority shall supervise the implementation of this act and of any ordinances issued hereunder. This means that the implementation and acceptance of this act is guaranteed not only as an operators duty but also within special tasks given to the authorities.

Therefore Art. 52 FICA says, that owners and operators shall undertake to grant the staff members of the competent authority free access to such premises and to enable such persons to carry out tests and, finally, to furnish such information and produce any such supporting documents as are needed by such persons to perform their duties.

2.1.2 Article 17, 20, 21 Federal Immission Control Act

Besides the possibility of getting infirmations according to Art. 52 FICA, the authority is able to influence the operation of installations.

In order to perform the obligations resulting from the FICA or from any ordinances issued

licence. And, following Art. 17, Para (1), if after the issue of such licence the protection attended to the general public or the neighbourhood against harmful effects on the environment or other hazards, considerable disadvantages and considerable nuisance turns out to be inadequate, the competent authority shall give such subsequent order.

Art. 20 gives the authority the instruments of prohibition and closure. If the operator of an installation subject to licensing does not comply with an additional condition imposed, and enforceable subsequent order given or a conclusive obligation ensuing form an ordinance issued under the FICA the competent authority may prohibit all or part of such operation pending compliance with such condition, order on obligation ensuing form such ordinance issued under the FICA. The competent authority shall give orders to close down or dismantle an installation established, operated or materially laterad without having been licensed to do so.

Even after having become final, a licence duty granted under the FICA may be revoked in its entirely or in part for any future operation.

This is possible under Art. 21, for instance, if the licensing authority were entitled by virtue of facts having occurred subsequently to refuse to grant such licence and non-revocation might be of prejudice to the public interest.

2.1.3 Finally under Enforcement Administration Act of Northrhine-Westfalia the authorities have the task to make sure that the operators realize their orders. Therefore the authorities have the opportunity of forced payments or that their orders will be done by other persons.

2.2 Liability of contravenes

Beside such orders, shown above, the German Law is able to punish contravenes against environmental legislation.

2.2.1 Art. 325 ff Penal Code (PC)

Under Art. 325 PC anyone should be punished who makes wilfully on negligently incontrary to duties given by the authority air pollution and noise, which liable to cause harmful effects on the healthiness of anybody or important objects.

Operating an installation which not have been licensed is under Art. 327 PC also not allowed as doing the same thing within a specific area.

2.2.2 Finally Art. 62 FICA contains a lot of Administrative Offenses which shall be liable to payment of a fine up to 100.000,= DM.

According to the constitution, the execution and enforcement of most federal laws, in this context of the FICA, is the responsibility of the federal states ("Länder"). They establish the authorities and control the administration.

Taking the state of Northrhine-Westfalia as example, the enforcement of the FICA and of the ordinances issued hereunder is the duty of 22 state inspectorates. The state inspectorates are lower state authorities according to the organisation structure of the state. They are supervised by five so called "Regierungspräsidenten" (Presidents of provinces), department "inspectorates", as middle state authorities. The top state authority for air pollution control is the ministry of the Environment, Regional Planning and Agricultur (MURL) at Düsseldorf, which superintends the state inspectorates, the Presidents of the Provinces and the state agencies.

The state inspectorates in their function as authorities for air pollution control supervise wether the operators of installations are compliance with legal prescriptions. They inspect the plants, perform measurements and pursue offences against the laws. If the state inspectorates find out an administrative offence, they impose fines. Serious cases are reported to the public prosecutor, who carry out the criminal procedure.

ENVIRONMENTAL ENFORCEMENT BY MUNICIPALITIES IN THE NETHERLANDS

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ENFORCEMENT: Collaboration and persistence

1 GENERAL REVIEW OF THE ENFORCEMENT SYSTEM IN THE NETHERLANDS

Enforcement is the ultimate test of environmental policy - in fact, of every area of policy. Enforcement involves forcing the regulated society to conform to the rules. The fact that there are various means for doing this will be discussed a little later. Above all, enforcement is the final link in the policy cycle, and thereby the prelude to the first policy-making link.

Confronted with the regulated society, and thus the practical situation, the new policy-making requirements imposed by everyday practice become clear. I should mention now that the effectiveness of the instruments used certainly forms part of this feedback, which has the character of an evaluation. Enforceability and public acceptance are important assessment criteria in this test.

In the Netherlands, municipal authorities bear primary responsibility for environmental policy. These authorities are responsible for supervising the vast majority of the country's companies; 400,000 in all. This enormous number of companies includes many organisations which place a limited burden on the environment. As an example, I can cite the combined residential and office buildings, or which 50,000 are subject to licensing requirements. Provincial authorities are responsible for about another 3,000 companies, either because of the complexity of the industrial processes used or because of their high external impact.

The Netherlands covers an area of some 35,000 km^2, has a population of 15 million, and is divided into 12 provinces and 649 municipalities. The provincial authorities, and the municipal authorities in particular, have an open administration in which a large number of tasks are carried out within an integrated policy framework. The municipal tasks may be strictly autonomous duties, such as responsibility for drains and sewers, or duties imposed by national legislation, which can allow municipalities a greater or lesser margin for independent policy-making.

The entire territory of the Netherlands is also divided into water authorities. These are directly elected, functional regional organisations, which bear responsibility for water management and purification of waste water.

Naturally, the municipalities not only concern themselves with the companies within their boundaries, but also ensure that everyone in their territory complies with the relevant environmental regulations. They supervise moped noise levels, for instance, and discharges of chemical wastes into sewers (cleaning agents, paint remains, medicines etc.) or the street (from lubricants when engine oil is changed, to dog dirt etc.); they also monitor the composition and presentation of domestic refuse (compulsory separation of organic wastes, building and demolition wastes, domestic chemical wastes etc.).

In view of the enormous number of potential polluters and actual transgressions, formal enforcement can never cover the entire population in full. Priorities must be set, and a mix of instruments must be applied.

Municipal authorities are not the only enforcers: a multitude of different organisations may concern themselves with the same company. In addition to the general environmental licenses issued by local authorities under the Nuisance Act, many of the 400,000 companies are required to hold special licenses under other legislation. The water quality inspector may, for instance, call on certain companies to conduct checks of water quality control. In addition to the general administrative bodies, the police and the public prosecutor have their own powers of investigation for the enforcement of criminal law and could, in principle, operate independently of municipal administrative enforcement activities.

Environmental policy is made at different levels. Legislation and the relevant standards and directives provide the framework within which other tiers of government must operate. The aim is

allow the greatest possible amount of local policy-making freedom, in order to ensure a customised approach. Naturally, the margins of freedom vary from one area of policy to another.

Unlike many other countries, central government in the Netherlands does not, barring a handful of exceptions (e.g. for nuclear power), perform first-line supervision of compliance with legislation. Central government inspectors supervise the ways in which other tiers of government perform their duties. Controls aimed at certain branches of industry can cut across municipal priorities in extremely aggravating ways. Coordination of the actions of different government agencies is urgently needed. For a company, it is incomprehensible and exceedingly annoying to have a succession of different enforcers moving in.

2 POSITION OF MUNICIPAL AUTHORITIES IN ENVIRONMENTAL POLICY IS NOT SELF-EVIDENT

The fact that municipal authorities have an important environmental task has not always been self-evident. Despite their statutory duties, municipal authorities have allowed many companies to operate without licenses and have certainly not conducted enough inspections. For more than a century, these authorities have been able to avail themselves of the Nuisance Act, which affords them responsibility for controlling local disturbances by companies.

When real environmental policy was developed, the government did not opt to extend the Nuisance Act, but introduced new legislation, with stringent rules, for each new approach laboriously agreed in Parliament. Consequently, each compartment was regulated separately in law and, moreover, the provinces were made responsible for the majority of the new tasks, rather than the municipalities. Responsibility for purification of waste water and the relevant installations was actually withdrawn from the municipalities by law.

With each new piece of legislation, new financial resources were generated to fund its implementation. In an era of stringent austerity measures, this became increasingly difficult (municipal authorities receive about 75% of their income from central government). Licensing also became increasingly expensive, due to the tighter requirements imposed in response to increasingly complex processes and the use of more hazardous substances.

For a time, municipal authorities were unpopular with the environmental movement and with many politicians, as they were felt to be too close to local industry to be able to take an independent view in the field of tension between economic and environmental interests. Gradually, the idea gained ground that environmental policy needs to be as close to the public as possible, and must be formulated in direct correlation with other areas of policy. In fact, it was precisely the political approach, rather than the technocratic one, which proved to be the most effective.

Relationships between municipal and central government, originally confrontational and marked by scepticism, has now changed into a partnership: tasks are undertaken jointly, using the strengths of both partners. Research established the number of officials required at each level for the different municipal environmental tasks, and the costs. The studies showed that a population of 70,000 is the minimum needed to carry a proper official apparatus. Collaboration between municipal authorities is therefore essential. Central government made financial resources available on a structural basis, issuing instructions that within five years, all companies falling under the responsibility of the municipalities should be properly licensed and should be inspected with the proper frequency. To encourage collaboration, a 25% bonus was offered over and above the basic amount in case of collaboration. At national level, the operation was led by a steering group in which the Environment Department, the inspectorate and the Association of Netherlands Municipalities (VNG) worked together.

The National Environmental Policy Plan Plus (NEPP-Plus) has since been published, operationalising national policy in a large number of action programmes. To clarify what is expected of municipal authorities in the execution of this plan, all the objectives have been translated to the municipal level, assigning priorities and the relevant official action. This document is known as the Framework Plan of Approach and is the pride of the Department and my own organisation. All municipal authorities use the Framework Plan to define their own situation and to prioritise action. With the help of the Framework Plan, they have all prepared their own environmental policy plans,

interpreting the points for action in terms of their own situation. This document serves as a basis for discussions with industry and environmental organisations and is included in the regional talks of the municipal authorities working in partnership. Local communities now know what they can expect of their municipal authorities.

3 REGULATION SYSTEM

Before continuing with the theme of enforcement, I must first explain the regulations themselves. In a large number of branches of industry, licenses are no longer required. Instead, these branches are subject to General Terms and Conditions. Individual companies themselves must ensure that they comply with the requirements. Plans to form, expand or change a business must be reported to the local authority. The municipal authorities do still conduct inspections to check compliance with the General Terms and Conditions.

The repeal of licensing requirements was a result of central government deregulation efforts. The branches concerned consist of small, fairly uncomplicated businesses of a homogenous nature: butchers, bakeries, LPG stations, etc.

The NEPP-Plus laid down a large number of target reductions in emissions, which must be realised within a specific period. The plan also names the branches of industry which must make a particular contribution to the reductions, known as the policy target groups. Target reductions are agreed with industry for individual substances and are laid down in a declaration of intent, which is then elaborated in a covenant. The three tiers of government hold joint talks with representatives of the branch of industry concerned, and each sign the covenants. A covenant has already been concluded with the basic metals industry and one with the graphical industry is almost complete.

Covenants are a national 'bubble': they show total national volumes of pollution levels considered admissible for emissions of a specific substance. This makes clear what is expected of a branch of industry. The municipal authority is given some indication of the standards which can be imposed in a license. The distribution of pollution control measures will have to be considered within the branch of industry itself. Clearly, this will demand a considerable amount of consultation. Industry feels that covenants should, in fact, serve as a package of standard conditions and that therefore, there should be no scope for further development by a municipal authority. The municipal authorities adhere to the target group policy, because this means that environmental policy is internalised in a branch of industry and is developed in a corporate environmental plan by the individual companies. This plan serves as the basis for negotiations with the local authority. However, municipal authorities explicitly want a considerable margin of policy freedom in order to tailor final licenses to the situation required locally. In the enforcement situation, that could lead to problems in future.

The licensing and enforcement situation is complex, as I have already shown. There is every reason for concerted action. Different parties in society must help to create a desired situation through coordinated action: a system of countervailing power. Strictly formal enforcement, on the basis of administrative and criminal law, is only one option within a wide spectrum of different instruments. An orchestra does not always want to use only its heaviest instruments, like the kettledrums and tubas: the same applies in government.

4 CONDITIONS FOR ENFORCEMENT

A number of conditions must be met in order to realise effective implementation of environmental policy, and thereby, its enforcement. Firstly, a municipal authority must clearly define what it wants and must make this visible in a proper document. Secondly, the policy must be discussed as far as possible with the different target groups, in an open procedure.

The partners must be told what has and has not happened to their contribution, and why. Where possible, the partners' requirements must be satisfied. This can mean adaptation of the policy itself, or changes in the phases of execution. Standards and figures often seem extremely hard and fast, with a scientific basis, but on closer inspection, are ultimately a political compromise.

Operating in this way can sharply increase public support for policy. General public information must complete the process. The public, too, must be able to see how any compromises are reached and must be shown that high environmental returns have, nevertheless, always taken priority. In the negotiations with industry, the creation of a basis for sound control must be agreed: this could be a corporate environmental plan, but also a certain method of supplying information, together with the appropriate monitoring system.

I have depicted support for policy as a fairly harmonious process: in reality, of course, this is not always the case. A government organisation needs partners in order to pursue its policy, certainly in industry, where economic gain can quickly gain the upper hand. It can be made clear to banks and insurance companies that the government will not only bring licenses up to date, but that enforcement action will follow. Experience shows that the RABO Bank is by far the best enforcer if a guarantee is needed for a company loan. Trade unions have an interest in ensuring high standards of environmental hygiene in companies, both for the health of their members and for the continuity of the company. Finally, the public can be asked to keep a watch and to inform local authorities or the police if environmental transgressions are suspected, or to institute civil proceedings themselves.

Publicity is needed to let the public know the municipality's environmental plans. It can also be used to promote desirable environmental conduct. Some directors of municipal environmental services use publicity as a weapon to make reluctant companies conform more quickly to licensing requirements. Press announcements of targeted campaigns in a certain area or branch of industry markedly improve collaboration from the companies concerned. In any action against a company, the presence of the press, tipped off in advance, can make it clear to other potential transgressors in the same branch that the steps are being taken in earnest.

5 PRIORITIES ARE UNAVOIDABLE

I have already mentioned the enormous number of potential enforcement situations and the fact that it is impossible to pay the same level of attention to all of them, everywhere. A set of priorities will have to be drawn up for inspections, based on the potential burden which different companies can place on the environment. In other companies, unannounced random checks must be introduced. The enormous amount of work involved makes it obvious that butchers and bakers could mostly be left to their own devices and that one should rely on external tip-offs in these cases. Self-regulation should be encouraged as far as possible. I have already described how this could be done.

It must in any event be made clear to everyone that action will be taken if violations are discovered. An obvious step would be to require restoration of the former situation, for instance in the case of discharges into the soil by compulsory cleaning, or compulsory replanting, in the case of unlawful felling of trees. If no appropriate response is made to the detection of a violation, action must be systematically pursued, in escalating stages. Ultimately, criminal proceedings may be necessary. Naturally, these will be required where criminal activities are involved, and the closure of the company will be the obvious step. But Dutch law does not make matters easy for enforcers. If a municipal authority announces a company closure, the company concerned can appeal to the Council of State. If the company has been operating for a long time without a license, or in violation of license terms, the Council will tend to overturn the closure decision. Tolerance of a violation is then interpreted in the transgressor's favour: which is a rather remarkable situation. After all, a company should comply with the law, but it is not the company, but the supervisory authority which is held liable for such compliance. These roles urgently need reversal. A company which operates without a license, or in contravention of license terms, should be charged for the economic benefits it has illegally enjoyed. This would have a considerable effect as a preventive measure.

Enforcement is a difficult task, and it requires training. It is certainly not always an easy matter to identify the regulation which has been contravened from among the multitude of central government, provincial, municipal and water board regulations which simultaneously apply to one and the same company. The method of action and of gathering evidence also requires precision. It can cost officials a fair amount of difficulty to act in a company which confronts them with large amounts of counter-knowledge. The right attitude also has to be taught. To assist municipal

authorities in this area, the Association of Netherlands Municipalities (VNG) has published a Guide for Supervision and Action on Environmental Legislation, describing the successive phases.

6 COLLABORATION IS ESSENTIAL

Inter-municipal collaboration is essential in order to formulate and implement effective environmental policies. The whole of the Netherlands is, by now, covered by partnership areas. In the first instance, these involve joint use of sufficient official capacity. In time, collaboration grows towards a regional environmental service and a policy-making body. Ultimately, the absorption of these regions by genuine regional administrative bodies, which are directly elected, is inevitable.

Enforcement involves a variety of different administrative organisations: municipal authorities, provincial authorities, inspectorates, the police force and the public prosecutor. The Environment Department encourages the formation of enforcement regions.

We already have tripartite consultation between Mayors, in their capacity as heads of the police force, their local Chiefs of Police and the public prosecutors for the districts concerned, in which public order and investigation are discussed in general terms. In some cases, the municipal Alderman responsible for Environmental Affairs will take part in the talks, in order to coordinate enforcement of environmental policy.

A major reorganisation of the police force is currently on its way in the Netherlands. The country is divided into 23 police regions, which are far larger than the environmental regions. Separate enforcement regions, corresponding to the environmental regions, will now operate within the police regions. The enforcement regions will reach agreements on priorities, methods of action, where more than one local authority is involved, publicity and coordination of the action to be pursued. In many cases, persuasion is tried first when violations are discovered, followed by official action, with criminal proceedings as a last resort, or as additional action. However, where existing organisations are involved, the inspectorates and environmental organisations do tend take the view that matters have gone beyond the information and persuasion stage!

If necessary, the different stages of the enforcement process must be organised and followed in ways which ensure that procedural errors or inaccuracies in one phase cannot jeopardise the success of a later one. The use of standard procedures wherever possible, and the creation of a joint computerised data base, can be a great help here.

Environmental offenses do not always involve malicious intent. This is why information is so important. Many contraventions are inadvertent. Here again, information or a different organisation of the process should be used reduce the margin of error as far as possible. Where there is lack of interest, information will not be enough and corrective action will be needed, with or without a degree of publicity. In the case of criminal offenses, a mix of instruments should be used, including criminal proceedings. Sometimes the possibilities for official and criminal enforcement overlap. For instance, the judiciary can require significant improvements in environmental quality as part of a settlement.

Generally speaking, criminal law is not yet adequately geared to handle environmental offenses. The penalties are usually exceptionally light and as a result, limitation periods are short. In the Netherlands, many environmental offenses are still not covered by the Economic Offenses Act and even when they are, do not rank very high. Consequently, the instruments for tackling environmental offenses and the accompanying penalties are equally weak.

CHOOSING AMONG CRIMINAL, CIVIL JUDICIAL, AND ADMINISTRATIVE ENFORCEMENT OPTIONS

A COMPARATIVE DISCUSSION OF UNITED STATES AND NETHERLANDS EXPERIENCE

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PRELIMINARY NOTICES

Mr. van Zeben is currently Head of the Environmental Crimes Department and Criminal Assistance Team for the Environmental Inspectorate in the Directorate for Environmental Protection for the Ministry of Housing, Physical Planning, and the Environment of the Netherlands. In that position, he manages the group of people who are responsible for the inspectorate's criminal information system as well as a range of technical and investigative experts who provide assistance for the prosecutions of environmental crimes. Prior to taking this position, he was a public prosecutor located in the Hague with responsibility for a variety of environmental criminal cases. Ms. Mulkey is Regional Counsel for Region III of the United States Environmental Protection Agency. Her office is responsible for providing legal support to EPA's civil, criminal, and administrative enforcement activities in the five-state region which includes Pennsylvania, Virginia, Maryland, West Virginia, Delaware, and the District of Columbia. The views expressed here are those of the authors and do not necessarily reflect the views or positions of their respective agencies or governments. The authors wish to acknowledge the assistance of Bob May, a senior lawyer in the Environmental Inspectorate of the Netherlands, Elisabeth Schippers, one of the state's attorneys who represent the Dutch government in the civil courts, and Martin Harrell, the Regional Criminal Enforcement Counsel for USEPA Region III.

For convenience, the United States Department of Justice and the Netherlands Ministry of Justice are here collectively called the Justice Ministries. The Directorate General for Environment of the Netherlands Ministry of Housing, Physical Planning, and the Environment and the United States Environmental Protection Agency are collectively called the environmental agencies. For ease of reading and because this is not intended for publication under academic standards, we have chosen not to include formal legal citations to the various provisions of the laws of the United States and the Netherlands or to written legal authority for the conclusions of law we include here. We have provided a list of references which we believe will be more or less readily available to the reader upon request from the source of the publication referenced.

SUMMARY

This paper presents a discussion of the considerations involved in choosing a formal enforcement response from among three options: criminal prosecution; cases brought in the civil courts; and administrative enforcement actions. The paper assumes that the enforcement program making these choices has decided that there is an important role for formal coercive actions and has available a legal framework that provides at least some opportunity to bring legal action in criminal courts, in civil courts, and under administrative or executive governmental authority. The discussion draws extensively on the experience of the enforcement programs of the United States and Netherlands, both of which have enforcement programs and legal systems which fit these assumptions.

This paper discusses four primary factors which affect the choice of formal enforcement options, beginning with the factor of the principal purposes or goals of enforcement. We identify

five such goals and evaluate how each of the enforcement choices fits within the framework of this set of purposes/goals. The additional factors which are described and evaluated are the factor of legal characteristics and limitations of the applicable laws, the factor of the facts and circumstances of each particular case or violation, and the factor of practical realities and considerations. Within each of these sections, the laws and experiences of the United States and the Netherlands are used to illustrate how each factor can influence and affect the process of choice among the three types of formal enforcement options.

1 INTRODUCTION

Societies who value environmental protection and governments who have chosen to adopt policies and enact laws to promote environmental protection must evaluate and address the questions relating to enforcement of environmental laws if the goals of environmental protection are to be converted into actual results. This fundamental role for enforcement considerations in any system aimed at environmental protection provides the background and basis for discussion of a number of aspects of enforcement. Among those potential topics is the area of specific legal instruments for the implementation of enforcement in specific circumstances or cases. While those legal instruments may take a number of forms, three of the most fundamental in western jurisprudence systems are criminal enforcement, civil judicial enforcement, and administrative enforcement.

The purpose of this paper is to discuss both the ideal and the actual processes and factors influencing choice among available enforcement instruments for use in any given case and for various types of cases or circumstances. We recognize that a discussion of choice among criminal, civil judicial, and administrative enforcement involves certain assumptions that may not, in fact, be present in the practical circumstances in which decisions about enforcement are actually made.

For example, a free choice among these three options requires, in the first instance, that all three be available. In fact, in the Netherlands, the civil judicial option is available only under limited circumstances and for limited purposes, as we will discuss more fully later. Briefly, the limitation arises from the fact that the Dutch environmental laws do not specifically authorize access by the government to the civil courts for the purpose of enforcing the statutes. Therefore, the government may use the civil courts only under some general legal theory available to any private party, such as tort or contract. However, a wide range of situations can be addressed in this manner, ranging from recoupment of the costs of government response to pollution to emergency actions to prevent pollution events. Similarly, under certain U.S. environmental statutes, the civil judicial option is not available for penalty actions (Toxic Substances Control Act and Federal Insecticide, Fungicide and Rodenticide Act). We should also note here that the ultimate recourse at the end of all administrative proceedings in the United States is to the courts, either by appeal taken by the enforcement target or by action taken by the government to enforce the final administrative action. In that sense there is no purely administrative option.

A discussion limited to choices among these three options implicitly rejects the choice of informal enforcement options which invoke no specific legal process. In fact, all enforcement programs make at least some use of informal mechanisms to effectuate enforcement, and both the United States and the Netherlands have experienced periods of time and circumstances where there has been fairly extensive use of informal types of responses to enforcement situations. However, both countries have adopted clear national policies favoring formal legal response for significant enforcement matters, and we have made a conscious decision here not to include informal actions among the choices covered by this paper.

Another implicit assumption is any discussion of free choice among these options is that the same persons or institutions can control decision-making and implementation of all three. In fact, in both the United States and the Netherlands, the cast of players and decision-makers changes somewhat depending on which option is being considered. In both systems, for example, a case that is declined by the prosecuting authorities within the justice ministries cannot be pursued as a criminal case even if the enforcement decisionmakers within the environmental

agencies would choose the criminal option for that case. On the other hand, the prosecuting personnel in the justice ministries are not likely to be involved at all in the dialog and decision-making as between civil judicial and administrative authorities.

Further, it is important to bear in mind throughout that practical realities may override the theoretical reasons to prefer one option over another. If one area is hampered by seriously inadequate resources, disinterest or hostility from key persons or institutions, for example, it will obviously be a less palatable choice regardless of its apparent correctness for the facts and circumstances of a particular case. We think that practical limitations are so important that we discuss them below as one of the factors influencing the decision among enforcment options.

Finally, it is important to acknowledge that the handling of any one case does not necessarily involve the simplistic choice of just one of these three options. In fact, it is not uncommon at all that a criminal case may also require some use of civil or administrative process to address ongoing environmental hazards or recoupment of governmental costs expended to address environmental damage. Similarly, as noted above, administrative enforcement may have to be combined with activity in the courts to make it effective in the face of continuing resistance on the part of the enforcement target. During the course of civil judicial proceedings as well, administrative authority may be properly used in some circumstances, although that approach would be extremely rare in the Dutch system. The specific strategies and rationales for integrating multiple use of these options in a given case is beyond the scope of this paper.

In spite of these complexities, we believe it is possible to improve the implementation of environmental enforcement through careful consideration of how choices among enforcement options are being and should be made in both the United States and the Netherlands. We will discuss in turn the primary criteria or decision factors which we see as relevant to the decision about which enforcement option(s) are best for a given set of circumstances, using information about actual practice in the two countries throughout to illustrate these principles and general ideas.

2 PRIMARY FACTORS INFLUENCING CHOICE OF ENFORCEMENT OPTION

The primary factors affecting choice among enforcement options, which we will discuss in turn, can be identified as follows:

1. Purposes or philosophy of the enforcement program; goals, results sought, and the like.
2. Legal characteristics, qualities, aspects, and limitations of each type of proceeding under the applicable law.
3. Nature of the facts, evidence, and surrounding circumstances of each particular case or violation.
4. Practical realities or limitations affecting the implementation of each option.

3 THE FACTOR OF PURPOSE OR PHILOSOPHY OF THE ENFORCEMENT PROGRAM

3.1 Elements of Purpose and Goals of Enforcement Programs

Although the very idea of an enforcement program implies something about the purpose - to enforce the law - it is possible to identify a number of aspects of enforcement purpose and philosophy which are likely to affect the way enforcement is implemented, including the ways choices are made among available enforcement tools. In general, the purposes behind the choice to pursue any specific case will be one or more of the following:

1. Achieving compliance by the target of the enforcement action.
2. Promoting deterrence by "sending a message" to this violator and other violators to encourage compliance now and in the future.
3. Addressing environmental emergencies or hazards of immediate concern.

4. Reducing overall environmental risks over the longer term.
5. Promoting fairness and even-handedness, and enhancing fair competition through a "level playing field".

There may also be certain subsidiary purposes, which are usually considered because they bear some relationship to the primary purposes identified above. For example, the enforcement authorities may want to test new or unused legal theories in an effort to strengthen overall enforcement. It may be important to obtain experience in a certain area or type of proceeding. Certain types of cases may be brought to maintain the credibility of an enforcement agency or even of specific enforcement instruments or tools. Each of the three types of enforcement instruments can be evaluated in light of how well it achieves these purposes.

3.2.1 Deterrence and Criminal Enforcement

The criminal option appears to us to be best suited for promoting deterrence, as it is generally regarded as the most severe sanction available from the standpoint of actual consequences (possible loss of liberty and/or severe fines) and public perception (stigma). It may also carry additional consequences, as in the provisions of the United States Clean Water (Section 508) and Clean Air (Section 306) Acts requiring the barring of a facility subject to criminal conviction from participating in government contracts until it is removed from the list of such facilities. Under the Dutch criminal law, conviction for economic crimes (which include environmental crimes) can result, for example, in the loss of certain civic rights, required labor, and/or the stoppage of some or all business activities at the location of the offense for up to one year. The existence of a record of a criminal offense also has a lasting impact on any violator. The criminal enforcement process is likely to send a potent message to any violator, and if it is accompanied by enough publicity to assure that other violators know of the action, it is also a powerful message to them as well. Even in the deterrence area, however, the criminal sanction may not achieve the desired purpose if there is a more significant likelihood that the case will be lost or dismissed, or if the sanctions imposed are too light. For example, if the criminal fine does not recapture the economic gain obtained through violation and if there is also no imprisonment or other consequence, a violator may be willing to calculate that it is advantageous to violate the environmental law even if there is a likelihood of criminal enforcement.

3.2.2 Environmental Compliance and Criminal Enforcement

The idea of environmental compliance should not be entirely separated from deterrence, of course. The whole point of deterrence is to prompt compliance by not only the target of enforcement but by others who learn the lesson that violations do not pay. In this sense, criminal enforcement is well suited to the compliance purpose.

Criminal enforcement can also be an effective tool for achieving specific compliance at a given facility and for addressing environmental emergencies where the legal system provides a mechanism for the prosecutor to use legal options to govern the behavior of the violator. In the Netherlands, for example, both the prosecutors themselves and the criminal courts have the authority to impose so-called preliminary measures during the period prior to trial. These measures can impose restraints on certain activities and/or require proper storage of materials. The preliminary measures authority of the judges entends to orders to partially or completely stop operations or order an outside administrator be put in control of the business or operation. These authorities are set forth in articles 28 (for prosecutors) and 29 (for judges) of the Economic Crimes Act, which applies to environmental offenses, among other economic crimes. These measures are limited to six months duration, and do not survive the conclusion of the trial. As part of the final decision in a criminal proceeding, Dutch judges can require total or partial stoppage of business activities for a one year period, appoint an administrator to the business of the convicted person, or impose an obligation to perform the acts required by the environmental laws or to refrain from the acts prohibited by those laws. By contrast, the United States courts generally do not hear petitions for injunctive type orders in the context of criminal proceedings,

and U.S. prosecutors do not have any comparable authority to the preliminary measures under Dutch law. There is some potential for environmental compliance requirements in sentence conditions, but that requires waiting until the end of the criminal enforcement process, perhaps including appeals. Bail conditions may also provide some limited opportunity to indirectly govern compliance behavior in some cases. Other than limited orders directly related to the criminal case, such as to preserve evidence, court orders for environmental compliance activities and to address environmental emergencies require the initiation of civil proceedings in the United States.

3.2.3 Risk-based Planning and Criminal Enforcement

The use of criminal enforcement as a tool to address the areas of greatest environmental risk requires planning and targeting criminal investigative resources and/ or the allocation of resources to the development of criminal cases on the basis of areas which pose the more serious risks. In general, a criminal enforcement approach that relies on more or less random identification of criminal violations, such as through tips or incidental to police patrols, may not be well suited to promoting the goal of directing enforcement toward the highest risk targets or industries. In both the United States and the Netherlands, criminal enforcement has experienced a period during which criminal cases were identified outside the process of targetting of enforcement priorities developed for use by the environmental enforcement agencies. When that type of approach dominates, the criminal enforcement program will fit fully with risk-based planning only to the extent that compliance monitoring activities targeted by the enforcement agencies are able to identify criminal cases and to have those cases included with cases identified through the more random approaches and/or to the extent that the randomly identified cases are in the priority areas.

The existence of a disparity between the way criminal cases had been identified and the priorities set by the enforcement agencies has been a concern in both the United States and the Netherlands, and both governments have introduced some mechansims to enhance the integration of criminal enforcement with overall enforcement priority-setting. Given the independence of the prosecuting authorities from the environmental agencies, this has generally taken two forms, coordination and the selective supplementation of resouces for criminal enforcement consistent with the goals of the environmental agency. In the first instance, the environmental agencies and the prosecuting authorities can develop dialogs and coordination mechanisms to foster joint planning and common understandings about what kind of criminal cases should be pursued and why. This process of integration between the Ministry with environment responsibility and the Justice Ministry is particularly well developed in the Netherlands, where a wide variety of mechanisms are employed to effectuate coordination and joint planning. These include regional and national groups who meet frequently and involve not only the environment ministry and public prosecutors (justice ministry), but also the national police force (interior ministry,, organized into 25 police regions) and provincial (12 provinces) and municipal (>600 municipalities) officials, all of whom have important roles in environmental enforcement in the Netherlands. Coordination occurs among officials are all levels, ranging from the highest elected officials, through senior civil service management, to working-level networks.

The United States has also seen a number of mechanisms for such coordination between the Environmental Protection Agency (EPA) and prosecutorial authorities in the Justice Department, ranging from joint participation in national enforcement conferences, joint participation in environmental crimes task forces in selected areas, sustained coordination by EPA criminal attorney and investigative personnel with a large number of the ninety-three United States Attorneys' offices, to coordination between the highest levels of environmental enforcement management at the Environmental Protection Agency and the Department of Justice.

The environmental agencies also control significant aspects of the resources necessary to support often complex and technically difficult environmental crimes cases. They have both investigatory and legal personnel available to identify, develop, and support the prosecution of these cases. They are also often the best or only source available to prosecutors for technical assistance in areas like sampling and analysis or disciplines like toxicology, hydrogeology, or biochemistry. By exercising decision-making authority over how such resources are used, the

environmental agencies can significantly influence the nature and direction of environmental criminal enforcement. By this combination of coordinated planning and resource support, risk-based enforcement planning can be a key factor in the criminal enforcement choice.

3.2.4 Fairness and Criminal Enforcement

Criminal enforcement also has an important role in ensuring fairness and even-handedness. A fair system should have some way to differentiate between degrees of seriousness of violations and culpability of violators. The use of the criminal option for the more serious and more willful violators helps establish an over-all sense that the governmental response is appropriate to the circumstances. For this factor to be properly served, however, cases that are similar should be handled similarly. This can be a problem if local prosecutors in different parts of the country have significantly different views about which cases are appropriate for criminal prosecution, or if the approach to levels of imprisonment or fines is very different. This latter issue has been tackled in the United States by the publication of sentencing guidelines applicable to environmental cases and applicable for judges in all federal courts. Judges may only depart from the guidelines for good cause stated in the record of the proceedings, and departure from the guidelines can form the basis for an appeal by either prosecutors or defendants. In both countries, the central office of the Justice Ministries maintain a role in management and oversight of the overall nation-wide docket of criminal cases as a mechanism for some control over consistency. In the United States Department of Justice, the Assistant Attorney General for Environment and Natural Resources maintains an environmental crimes section which provides assistance to United States Attorneys for criminal cases and supports the Assistant Attorney General's role in docket oversight for environmental crimes. Perhaps because of the central role played by criminal enforcement in the overall environmental enforcement program, the Netherlands Justice Ministry has developed extensive planning and management programs specific to environmental crimes. These include the development of guidelines imposed by the advocates general, who are senior to public prosecutors and who work in the appellate courts. These guidelines from the advocates general cover the methods of prosecution, appropriate sentences, settlement provisions, and the like. If a given prosecutor does not follow the guidelines, the deviation must be justified. In addition, the public prosecutors, including the advocates general, all report to one of the five regional Prosecutors General, each one of whom also specializes in one or more types of criminal enforcement, and there is a Prosecutor General responsible for environmental crimes. There is also a full-time national coordinator for environmental enforcement within the Justice Ministry who provides a mechanism for the sharing of information about on-going cases through informal and formal written communications and meetings. Finally, in both countries the efforts of the environmental agencies to participate in environmental criminal enforcement through assistance and coordination with the prosecutors also provide a mechanism for some impact on consistency and common approaches to these cases.

3.2.5 Summary of Relationship Between Purposes of Enforcement and Criminal Enforcement

In summary, the criminal enforcement option is normally the most effective choice for maximizing the deterrent impact of enforcment, but its effectiveness for promoting compliance, addressing environmental emergencies, or supporting longterm planning objectives like risk reduction depends on a number of factors that may not be present in all criminal enforcement programs. Proper exercise of criminal enforcement authority fully supports the principle of overall fairness of an enforcement program.

3.3.1 Environmental Compliance and Civil and Administrative Enforcement

Civil judicial and administrative enforcement appear to be somewhat similar to each other in their relationship to the basic purposes of enforcement, but there can be important differences. Both types of authorities permit the issuance of orders for compliance and orders to address

environmental emergencies. However, if an administrative order does not achieve its intended result, then the enforcement authorities must begin the process of obtaining judicial assistance in enforcing the order or obtaining the necessary actions. By contrast, when a judicial order is issued for compliance or to address environmental emergencies, violations of that order become contempt of an order of the court, and the full authority of the system to enforce court orders is immediately available. This availability of oversight by a court can be particularly important when the compliance activities are to occur over a significant period of time, and it is important to assure that interim milestones are met. In the United States, court orders are generally preferred for compliance orders involving the installation of major pollution control equipment, for example. These orders are often entered by the court on consent of the parties after settlement agreements are reached. Assuming the ready availability of both civil judicial and administrative order authorities and comparable ease of use, it would appear that the judicial option is often preferable for the purpose of obtaining effective compliance. However, as we discuss below, there may be legal and practical limitations that make these options not equally available or similarly easy to use.

3.3.2 Deterrence and Civil and Administrative Enforcement

Where the administrative and civil judicial options both provide for adequate sanctions in the form of civil penalties or similar burdens, they can both be effectively used to promote deterrence. Since a principle point of deterrence is to motivate the regulated community to comply before the government identifies them as violators, it is important for this purpose that the government be able to assure that violators are worse off for being caught by the government than they would be if they had complied without government involvement. Therefore, both the civil and administrative sanctions must be capable of imposing penalties in excess of the economic benefits from non-compliance plus some additional amount necessary to ensure adequate motivation to choose compliance over the potential consequences of enforcement. For this purpose, it may be necessary that the sanction exceed the amount of damages caused by the violations and it is definitely necessary that the sanction not be limited to violations that continue after detection by the government. (Otherwise, all violators could simply halt violations upon detection and escape all consequences.) For both of these considerations, there are currently limitations of the civil and administrative sanctions under Dutch law. Dutch civil courts are available for use by the governmental enforcement authorities only when the government can identify a cause of action based on private law, such as tort or contract. Therefore, the primary monetary sanction available in the civil courts is the recovery of costs expended by the government in response to a negligent or otherwise tortious act by a polluter. Where the costs of responding to pollution are significant, the requirement to pay these costs can have a profound deterrent effect. However, many types of violations do not lead to the expenditure of significant governmental response funds. Very significant air and water pollution, for example, may move so quickly in the environment that the government could not undertake clean-up activities. Other important types of violations, such as those relating to the proper documentation of the movements of hazardous waste, may not be directly associated with environmental pollution at the point of the violation. Dutch administrative law currently has no mechanism for imposing penalty sanctions for past environmental violations, although Dutch administrative enforcement tools like license revocation and facility shutdown can provide significant sanctions for past violations. Under certain of the Dutch environmental laws, the competent governmental authority can impose an administrative compliance order which includes an economic compliance incentive of significant sums for each day of continuing violation. For types of violations that can be halted immediately, this mechanism does not provide a deterrence effect or message to other violators. However, for violations which cannot be quickly corrected, this kind of administrative economic sanction has deterrence potential, depending on the levels of sanction for each day of continuing violation, the period of time necessary to achieve compliance, and the relationship of the resulting sanction to the economic benefits enjoyed by the violator from the period of prior violation. This administrative economic sanction, called a Dwangsom, is discussed in more detail in section 4.3 below.

The availability of comparable civil judicial and administrative penalties varies among U.S. environmental statutes. In the Solid Waste Disposal Act (Section 3008, also known as Resource Conservation and Recovery Act and generally identifiable as the principle law regulating hazardous waste) and the Emergency Planning and Community Right to Know Act (Section 325), the provisions for administrative and civil judicial penalties are essentially identical, with the same amounts set for each violation per day and with no absolute caps set on the total penalties. Under the Clean Air and Clean Water Acts, the same amount for each violation per day is provided, but the administrative option may be selected only up to a limited total penalty ($125,000 for the Clean Water Act, Section 309 and, absent Attorney General approval, $200,000 for the Clean Air Act, Section 113). On the other hand, only administrative penalties are available for violations of the Toxic Substances Control Act and the pesticides law.

Because there are circumstances where the judicial and administrative options are roughly comparable in terms of the scope of sanctions, we can consider whether one has any greater inherent capacity to promote deterrence. One could speculate that the greater formality and the additional burdens of appearing in the courts might serve to promote deterrence. Because publicity is so essential to the message-sending aspects of deterrence, it is also possible that judicial actions are more likely to be newsworthy or otherwise to become more widely known. Recent United States experience with administrative cases involving very substantial penalities appears to support the conclusion that these differences in deterrence potential may not be very great. Big or otherwise interesting cases obtain publicity in both forums, and the higher the stakes, the more likely the process is to be taken seriously, regardless of forum.

3.3.3 Risk-based Planning and Civil and Administrative Enforcement

To the extent that civil and/or administrative enforcement are available and effective to achieve compliance and deterrence goals, they can also be managed to maximize the effectiveness of an environmental enforcement program in terms of risk-reduction. To achieve this goal, the enforcement program must have mechanisms to channel its investigative efforts to the areas of highest risk-reduction potential and must also be able to choose which cases to pursue and how to pursue them at least partly on the basis of risk-reduction potential. In circumstances where the civil or administrative approach has proven effective in achieving environmental compliance at specific violating facilities, the use of this kind of enforcement at facilities which pose high risks would have a direct and immediate impact on the risks which compliance can affect. For this reason, both the United States and the Netherlands make use of a range of emergency and longer-range civil and administrative authorities to focus on compliance goals whenever a facility or situation presents conditions of high environmental risk. When there is evidence of imminent potential hazard from pollution, both systems are well-equipped with civil judicial and administrative enforcement responses. Under the Netherlands Clean Air Act, there is express administrative authority for short duration orders to prevent or control air pollution emergencies. (Chapter 5). Under most Dutch environmental laws, however, the administrative tools to address emergency conditions are the dwangsom already discussed and the bestuursdwang or administrative force whereby the government can, after proper notice, perform the necessary actions to halt violations and recoup the costs afterwards. Several of the United States environmental statutes contain provisions for administrative orders to address conditions involving imminent and substantial endangerment to public health or the environment or similar language. (CERCLA, Section 106; RCRA, Section 7003, Clean Air Act, Section 303). Under CERCLA, also known as Superfund, the government may also expend monies to respond to the release of hazardous substances and seek reimbursement from responsible parties. The civil courts are available under Dutch law upon a showing of negligence or unlawful act and the imminent threat of damages to the government, as, for example, the prospect that the government will be required to expend response funds. The court procedures provide for a short proceeding and immediate determination by the president judge based on a balancing of the interests of the parties. Following such a procedure (called a kort geding), either party may file a case for a full adjudication of the merits of the claims, may appeal the decision, or the emergency decision may stand without further proceedings. United States environmental laws make express

provisions for institution of civil proceedings to obtain court orders to prevent or mitigate actual or threatened imminent and substantial endangerment to public health and the environment. (See Section 4.2 below).

Both countries are also attempting to improve the targeting of investigative efforts so as to improve the effects of overall enforcement in areas of higher environmental risk. Both have underway a systematic effort to target certain industries, processes, or pollutants for specific emphasis and study. For example, in the Netherlands, specific targetting of enforcement activities has been designed and carried out for several important industrial sectors, such as LPG stations and pesticide depots. In addition to these nationally planned efforts to focus on certain industries or activities, the regional coordination process has led to special efforts based on regional problems. In the area between the Hague and Haarlem, for example, there has been emphasis on enforcement of the Pesticides Act as it affects the flower bulb industry centered in that region. Public prosecutors have worked out "project sessions" in some of the courts, where a number of similar cases are dealt with together. Various of the regional inspectorates have emphasized specific sectors, ranging from grain drying facilities to hospitals. The factors considered in selection of industrial sectors included the extent of potential environmental threat as well as extent of activity of that sector, and other matters.

Similarly, in the United States, there have recently been a series of national targeted enforcement initiatives, such as the 1991 filing of a large group of cases under several laws all relating to the pollutant lead (Pb) and the multi-media enforcement efforts related to the Great Lakes, the Chesapeake Bay, and the Mexican border. All of these initiatives were selected partly on the basis of risk considerations. Region III of EPA is now in the second year of an effort to develop enforcement responses at sites which were chosen for their risk-reduction potential and which are studied and characterized on the basis of a risk analysis as a part of the process of determining whether and how to pursue enforcement. These sites were generally not identified for attention through the normal process of detection of violations but were initially targetted on the basis of apparent significance of environmental risk based on available information about emissions, toxicity, and exposure potential. Enforcement actions have been pursued at several of these sites, include a steel plant and two chemical manufacturing facilities.

In sum, the close relationship between the planning and priority setting by the environmental agencies and their ability to make or affect decisions about civil and administrative enforcement makes possible a close relationship between these enforcement options and risk-based enforcement goals. Which of these options is better suited for this purspose will largely depend on which fits better with the compliance or deterrence purpose, and on which is more practically available and effective.

3.3.4 Fairness and Civil and Administrative Enforcement

An enforcement system is likely to provide for greater fairness if the enforcement agencies have a range of options to permit a more tailored response to each situation. For that reason alone, the use of civil and administrative responses for appropriate cases can promote fairness. The issue of fairness and the perception of fairness can be important in the choice between civil judicial and administrative enforcement. Civil judicial enforcement usually involves a more complex and burdensome process, but also a process which provides the opportunity for determination of the outcome by courts which are independent from the enforcement agency. By contrast, administrative enforcement is generally more informal and efficient for all participants, but the adjudication of disputes (that is, the conduct of any hearing or appeal) is, at least in the first instance, under the control of the environmental agency which initiated the enforcement action.

Administrative enforcement mechanisms are generally structured to address the possible concerns about fairness by providing for administrative procedures designed to assure some separation between the agency as enforcer and the agency as adjudicator. In the Netherlands, the administrative measures must be preceded by a warning. If violations continue, the administrative order can be initiated by the enforcement agency, and the recipient of the order may appeal the order and may seek a stay of its effect pending appeal. The stay request and

appeal are heard by an administrative court which has the final determination authority without further appeal. This administrative or executive court is an independent entity within the national government, which hears administrative cases arising not only in the environment ministry but in other ministries and at other levels of government. In the United States, the provisions of the law that establish administrative order and penalty assessment authority also provide for mechanisms to insure that there are procedural rights for persons against whom such actions are directed. For compliance orders, it has been determined by the United States courts in most instances that the opportunity to challenge EPA action is available when EPA (through the Department of Justice) brings a civil judicial action to enforce the orders. State of Alabama v. EPA, 871 F.2d 1548, 1557-60 (11th Cir.) cert denied, 110 S. Ct. 538 (1989) (CERCLA orders); Southern Pines Associates v. U.S., 912 F.2d 713 (4th Cir 1990) (Clean Water Act). For administrative penalty assessments (and for compliance orders under the Resource Conservation and Recovery Act), the U.S. environmental statutes provide for the right to administrative hearings which are conducted by administrative law judges or presiding officers located within the Environmental Protection Agency, but under requirements which include a bar on mixture of functions between the enforcement personnel and the adjudicating personnel as well as a bar to communications about the merits of any case between agency enforcement and decisionmaking personnel, except in the presence of all parties to the administrative proceeding. Depending on whether the administrative hearing in conducted under the adjudicatory hearing requirements of the Administrative Procedures Act, there may be other safeguards to independence of the administrative judges, such as independence within the general personnel system. In the United States, there is recourse to the civil courts at the end of the administrative appeals process, so that the particular action can be challenged on the grounds of lack of fairness, among other things.

In general, there is no good reason why administrative enforcment need be any less fair than enforcement which invokes independent courts at the outset. Because administrative procedures can be less burdensome, potentially less costly, and somewhat more informal and perhaps, therefore, less harsh in tone and atmosphere, they may even be perceived as promoting fairness. There is also the fact that agency administrative judges can develop considerable expertise in the environmental laws and related technical areas and may, therefore, be able to determine the issues in a more informed and efficient manner and be more likely to render similar results in similar cases. This potential for greater consistency in results for similar cases can be further enhanced where there is a process for internal agency appeal of the result from the first level of agency hearing, as is the case for the administrative hearing procedures under the U.S. environmental laws.

3.3.5 Establishing Legal Precedent Using Civil and Administrative Law

On occasion, it will be important to the enforcement agencies to obtain certain results on key legal issues in order to strengthen the overall compliance, deterrence, or risk-reduction effectiveness of enforcement. If, for example, there is is difference between the environmental agency and much of the regulated community about an interpretation of regulations or permits, this can lead to widespread failure of regulated enterprises to comply with the agency's interpretation until the matter is resolved by one or more cases in which the agency interpretation is upheld. Similarly, if there are issues about whether certain entities can be held liable, such as individuals who engage in certain activities within the context of employment by corporations, it may be important to establish the answers to such questions through decisions in enforcement cases. In evaluating the civil judicial and administrative enforcement options for this purpose, it is important to know how much weight a decision in either forum will carry, as well as how likely the matter is to have a favorable outcome from the point of view of the enforcement purpose. It may also matter how quickly a result is likely to be obtained. Although it generally appears to be accurate to say that decisions of the courts carry somewhat more weight than administrative decisions, it is important to remember that United States administrative decisions can also wind up in the civil courts, and those decisions are determined by the courts under a standard of review that involves considerable deference to the agency. Whether the civil courts are more or less likely to render decisions to the liking of the enforcement authorities may vary depending on

the type of issue or even on the particular part of the country where the case is initially heard. For technically complex issues or those requiring specialized environmental expertise, it may be more suitable to attempt to adjudicate the matters in the administrative forum.

In general, the selection of the right set of facts and circumstances for cases designed to test legal issues may be more important than the choice of civil judicial or administrative forum. We have not emphasized this enforcement purpose in our discussion of criminal enforcement because, as discussed below, it is generally desirable in criminal cases that the issue of whether there is a clear violation be as well established as possible. However, under laws where there are significant restraints on the circumstances under which civil or administrative cases can be brought, as is to some extent the situation in the Netherlands, it may be necessary to consider the use of criminal enforcement proceedings to resolve difficult legal issues that are of particular importance to an enforcement program.

3.4 Summary of Enforcement Purposes and Choice Among Criminal, Civil Judicial, and Administrative Enforcement

An enforcement program can evaluate the use of various enforcement options on the basis of how well each option will promote the basic purposes of enforcement. In both the United States and the Netherlands, the criminal, civil judicial, and administrative options have the potential to promote the principle goals of enforcement, although it is difficult to generalize about which types of mechanisms are always best suited to which enforcement purposes. As we have discussed, the particular design of each option under the law of each country often makes a significant difference as to how well suited that option is for a particular purpose. Excellent examples of those differences are seen in the greater flexibility of the Netherlands criminal procedures in their ability to obtain environmental compliance and the greater availability of sanctions in U.S. civil and administrative provisions with the resulting improvement in deterrence potential. The availability of all three options and their careful and strategic use will maximize the ability of an environmental enforcement agency to accomplish all of the primary purposes of enforcement that are important to the agency.

4 FACTOR OF LEGAL CHARACTERISTICS, QUALITIES, AND LIMITATIONS IN CHOICE OF OPTIONS

As we have indicated in a number of specific instances above, the specific terms of the applicable criminal, civil, and administrative laws can make a great deal of difference in the reasons for selecting one over the other for any particular case. In this section, we identify some of the key legal or structural characteristics of each of the three options under U.S. and Dutch law which are significant for purposes of considering choices among the options. It is not our purpose here to provide a comprehensive or detailed explanation of the legal structure of these three enforcement tools as set forth in U.S. and Dutch law, but rather to use examples drawn from these two systems to illustrate the role of such considerations in the choice among enforcement options.

4.1 Important Legal and Structural Characteristics of U.S. and Dutch Environmental Criminal Law

The criminal provisions of U.S. environmental laws are specifically set forth in each of the environmental statutes, and there is some significant variation among them. All of the statutes contain provisions for criminal prosecution of knowing and/or willful violations of all or most requirements, but only the Clean Water Act (Section 309) and the Clean Air Act (Section 113) contain provisions for criminal prosecution of certain types of negligent (careless) violations. Generally, the government can prove that a violation is knowing or willful by showing that the violator knew what he was doing and did so voluntarily, not accidentally. There are some very limited provisions for strict criminal liability in U.S. environmental laws, as for failure to give notice

of spills of hazardous substances above a designated quantity (Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act). Under the various U.S. environmental laws, criminal sanctions also vary considerably. Contrast, for example, the maximum $50,000 fine per violation and one year imprisonment for convicted pesticide registrants and producers under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (Section 14) with the maximum $50,000 per day of violation and three years imprisonment for knowing violators of the Clean Water Act (Section 309), with double these limits for second offenses. (These two examples do not include either the lowest maximum criminal sanction found in U.S. environmental laws or the highest.) Some of the statutes provide for increasing the sanction for second offenses and for knowing endangerment of persons; others do not. The Criminal Fines Act also provides a mechanism for increasing maximum fines in environmental cases in certain circumstances, such as where the death or serious injury of a person resulted from the violation or where the violator is a corporation. In environmental crimes, as in all other crimes, the U.S. government must prove the guilt of the defendant beyond a reasonable doubt, and the defendant has the right to a jury trial.

Under the Dutch environmental laws, each specific law also contains specific penal provisions, although some of these are limited to defining the violations so that they come under certain sections of the Economic Crimes Act. (See, for example, Section 28 of the Pollution of Surface Waters Act and Section 77 of the Soil Protection Act.) Under the Dutch environmental and criminal laws, there is generally strict criminal liability, that is, the prosecutor need only prove that the offense was committed by the accused and is not required to establish that the defendant did so knowingly or willfully. However, the level of sanction can usually be increased upon a showing that the offender knew or had serious reason to suspect, for example, increased risk to the health of others (Air Pollution Act, Section 91) or of the pollution of the soil (Soil Protection Act, Section 78). Similarly, under the Chemical Waste Act (Section 55), acts performed intentionally are defined as serious offences in contrast to minor offenses when performed other than intentionally. The Economic Crimes Act, which applies to most types of violations under all the environmental laws , distinguishes between intent crimes and guilt, or strict liability crimes. The maximum penalty for intent crimes is two years imprisonment and Dfl. 100,000 for businesses, in contrast to maximum sentences of six months and Dfl. 25,000 for the lesser, strict liability offenses. (All fines may be added to a sum sufficient to recapture the economic benefits obtained from the violations.) A few types of environmental crimes are covered under the Penal Code, where significantly higher prison terms, up to 12 or 15 years, may be available for knowing endangerment to the public health and threats to life, respectively. Other legal aspects of criminal sanctions under both systems are discussed above, in sections 3.2.1 and 3.2.2, ranging from economic consequences like limitations on government contracting opportunities and loss of control over business operations to personal consequences like loss of rights to civic participation. Where some of these sanctions are available only under certain of the environmental laws, as, for example the government contracting provisions found only in the U.S. Clean Air Act (Section 306) and Clean Water Act (Section 508), then the choice of criminal enforcement for violations of those laws may also differ.

In addition to the matter of available sanctions and the issue of whether the government must prove knowing or willful behavior, the legal aspects of criminal law that can affect when and whether it is a preferred choice include such considerations as the period covered by the statute of limitations (how long after the commission of the crime the government may prosecute), the limitations and mechanisms affecting investigations of criminal activity, and the nature and constraints of the procedural requirements governing criminal trials. One example of the effect of these factors on choices is the longer statute of limitations period available under Dutch law for persons who knowingly and willfully discharge pollutions to the soil, air, or surface waters where they know or should have known that it may cause danger to the public health (Penal Code Article 173a). Another example is significant differences in investigative tools available under the Economic Crimes Act and the Penal Code. For economic crimes, investigators have available a number of tools particularly designed for the investigation of business operations, such as the authority to impound administrative records and operations, open and sample packages, access to all places of business operations. Penal code investigative authorities do not include these

specific tools, but violations carrying longer prison terms (currently four or more years), most of which are now included in the penal code, open up the use of investigative techniques like wire-tapping, emergency searches, and preliminary detention of suspects. These differences can lead a prosecutor to focus an investigation on non-environmental aspects of a case which involves both environmental crimes and other violations which carry longer potential prison terms.

In the United States, investigative techniques and tools are significantly affected by whether the investigation is for civil/administrative or criminal purposes. Once the investigation has focused on potential criminal liability, a number of safeguards for the rights of accused persons are in effect, ranging from the role of the grand jury in determining whether and how testimony of witnesses is to be considered in felony cases to the specific Constitutional requirements relating to interrogations, searches and seizures, and right to counsel.

Finally, it is important to note in this section that the criminal law and criminal procedures may be very different in their ability to directly impose requirements relating to environmental compliance. As we discuss in section 3.2.2 above, the Dutch environmental criminal law does provide significant mechanisms for environmental compliance requirements, while the United States system leaves that task largely to civil and administrative law.

4.2 Important Legal and Structural Characteristics of U.S. and Dutch Civil Judicial Law

There are a number of fundamental and significant differences between the civil judicial systems of the United States and the Netherlands which combine to help explain some of the key legal and structural differences in how these two systems can work for environmental enforcement. In the first instance, the United States system is in the English common law tradition, where the decisions of higher courts are binding on lower courts and the notion of legal precedent (stare decisis) is accorded formal authority. The Netherlands has a code system, where each judicial decision can theoretically be issued without regard for prior determinations in other cases. In practice, this difference is not nearly so profound as it might seem. Civil judicial decisions in the Netherlands are widely reported and prior decisions are relied on by advocates and judges. Lower courts accord full deference to the determinations of higher courts, and higher courts are unlikely to reverse their own earlier outcomes. On the other hand, United States judges can and do distinguish current cases from prior cases in ways that permit some variation from ruling decisions, and higher courts may on rare occasions abandon prior decisions by reversal. Consequently, this apparently dramatic difference between the two systems does not appear to be particularly significant in the current context of environmental enforcement.

Other historic differences, however, do appear relevant in the environmental context. The first involves a fairly complex matter of legal history in the two countries which we risk severely oversimplifying, but which basically relates to the role of the government as litigant in the civil courts. At this point in American jurisprudence, it is a long accepted concept that the United States government will appear as civil plaintiff for the enforcement and implementation of a wide range of governmental funtions. The jurisdiction of the civil courts over such actions is expressly provided in many federal laws, including all of the environmental laws. Compare, for example, the language of the Clean Water Act (Section 309), where "the Administrator [of EPA] is authorized to bring a civil action. . . for any [specified] violation . . .in the district court of the United States", with the langauge of the Toxic Substance Control Act (Section 17), where "the district courts of the United States shall have jurisdiction over civil actions to. . .compel. . .the taking of any action required by [the Act]." In general, the U.S. environmental statutes also provide for access by the government to the civil courts in environmental emergencies, whether or not there is a specific violation of the environmental laws. See, for example, Section 303 of the Clean Air Act, Section 504 of the Clean Water Act, or Section 7003 of the Resource Conservation and Recovery Act. There is no comparable history of access by the Dutch executive authorities to the civil courts. In general, the Dutch legal system has established a clear distinction between governmental (or administrative) law on the one hand and civil or private law on the other. While the government can and does appear as a litigant in the civil courts, it enters them largely as a private party, with claims which are the same as or analogous to claims available to private litigants, such as contract or tort claims. The notion of effectuating uniquely executive authority in the civil courts is

mostly alien to the history of civil jurisprudence in the Netherlands. Nevertheless, the Dutch civil courts do recognize the special nature of the interests which government is entitles to protect and the special manner in which the potential or actual experience of damages occurs to the government. Further, there are certain express statutory provisions for the government's use of civil courts to obtain reimbursement of pollution response costs, such as set forth in Article 21, paragraph 11 of the Soil Cleanup Act.

As a result of this important historic difference of the role of the courts, U.S. environmental statutes have routinely provided an enforcement role for the civil courts while Dutch statutes make no such express provision for use of the civil courts. Consequently, the Dutch government (national, provincial, or municipal) may seek action from those courts only when it has a cause of action like those available to all private litigants, such as for recovery of costs expended as the result of the negligence (tort) of another or to prevent the commission of a tort, i. e. for emergency action to halt a dangerous situation which, if left unchecked, could result in the government's being damaged through having to expend funds to respond to the situation. In these kinds of cases, the key issue is not whether there is a violation of the environmental statutes, but whether there is an action in the nature of a tort by which the government has been or appears about to be damaged. Of course, evidence of violation is relevant to the issue of whether there is negligence, but it is not necessary, and it is not sufficient in the absense of a showing of damages or the threat of damages. There have been a number of cases successfully pursued in the Netherlands using this approach, primarily to recoup costs for soil cleanup activities. State vs. Philips Duphar (Volgermeerpolder) (Civil Court, May 31, l989); State vs. Akzo (Civil Court, December 12, l990); State vs. Aaprunol (Civil Court, November 10, 1989). There has also been some use of the emergency order authority of the civil courts. State vs. Benchiser (Supreme Court, April 14, 1988). However, the availability of the civil courts for environmental enforcement remains limited.

Because of the more extensive role provided for civil judicial enforcement under U.S. law, it is possible in that system to identify other legal structural factors relating to the civil judicial option which are relevant to the choice among enforcement options. For example, there are some important differences among U.S. environmental laws relating to both injuntive (compliance order) authorities of the courts and to penalty provisions. Under the Toxic Substances Control Act, for example, there is no express provision for administrative orders for compliance, so that there is only the choice of the court for obtaining a clear legally binding order to comply. However, the penalty authority of TSCA is limited to the administrative forum. This creates the dilemma of either choosing a solely penalty enforcement approach, a solely injunctive action enforcement approach, or pursuing enforcement in two different forums, even though the issue of liability will be the same for both. Although TSCA is the only statute that presents this particular scheme, the Resource Conservation and Recovery Act provides the other extreme: complete injunctive and penalty authority in both the judicial and administrative forums. Under this statute and most of the others, the enforcement authorities are generally presented with the issue of whether to seek compliance orders directly from the courts or whether to first issue such orders administratively, with the option of seeking to enforce the administrative orders in the courts in the event of violations of the administrative order. This decision is usually affected by the extent to which it is important to seek penalties for past violations at the same time, the complexity and duration of the compliance tasks to be addressed by such orders, the anticipated likelihood of compliance, and other strategic considerations. However, the choice of whether to invoke the civil judicial option must be informed by a careful analysis of the specific legal provisions for judicial enforcement contained in the environmental laws that are relevant to the facts of the case. Indeed, the differences in such provisions may also affect that choice of which environmental statute(s) to rely on in circumstances where the facts of the case permit a choice among statutes.

4.3 Important Legal and Structural Characteristics of U.S. and Dutch Administrative Law

In general, administrative enforcement authorities can be divided into injuctive or order authority and penalty authority. Both U.S. and Dutch law contains elements of both types of administrative enforcement, although the current Dutch environmental statutes do not contain

provisions for administrative penalties for past violations. The administrative order authority under both sets of laws, however, is generally very broad and clear. For the same historic reason that has separated Dutch governmental/administrative law from civil/private law, the
laws of the Netherlands provide for extensive administrative powers to implement and enforce executive authority. Therefore, under both the General Environmental Act (overall coordinating environmental law) and the specific environmental statutes, there are provisions for withdrawal or revocation of licenses (permits) (e. g. General Environmental Act, Chapter 8, Title 8.1, paragraph 8.1.2, section 8.22-8.26; Chemical Waste Act, paragraph 10, section 13-14; Air Pollution Act, Chapter IV, paragraph 2, section 33-37) and for closure of facilities (e. g. Nuisance Act, Chapter VII, section 28; Air Pollution Act, Chapter IV, paragraph 3, section 39.) These authorities are in addition to the dwangsum (order imposing economic incentives for future compliance) and bestuursdwang (order for governmental implementation of the compliance action), which can be imposed after warning and are subject to the right of appeal to the administrative court.

U.S. environmental laws do not expressly provide for all of the specific actions detailed in Dutch law, but most of the statutes do provide for issuance of administrative orders to compel compliance with the law and implementing regulations as well as orders to prevent, control, or respond to environmental emergencies. In a few statutes, this is very limited. The absence of express administrative order authority in TSCA is discussed above. The FIFRA also lacks express order authority except for the unusual and strong mechanism of the stop sale order provided in Section 13 whenever a pesticide is believed [by EPA on the basis of inspections or tests] to be in violation of the Act. The Emergency Planning and Community Right to Know Act also lacks express administrative order authority. Most of the other U.S. environmental laws do provide for the issuance of compliance orders (e. g., Section 309 of the Clean Water Act, Section 3008 of the Resource Conservation and Recovery Act, Section 113 of the Clean Air Act) and/or orders to address environmental emergencies (e. g. Section 1431 of the Safe Drinking Water Act, Section 7003 of the Resource Conservation and Recovery Act, Section 303 of the Clean Air Act, Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act). There are, however, some important legal differences among these provisions. Specific legal and/or factual findings must be made under the terms of each provision. Of particular interest to the issue of choice of enforcement option is the provisision of the Clean Air Act emergency order authority limiting its use to circumstances where "it is not practicable to assure prompt protection of public health or welfare or the environment by commencement of. . .a civil action."

Administrative provisions for the asssessment of penalties for violations of the environmental laws are available under most of the U.S. environmental laws, but are limited under the Dutch laws to the dwangsom provision applicable to the primary environmental laws, which provides for the imposition of economic incentive sanctions for a specified sum per day for violations which continue after the imposition of the Dwangsom (General Environmental Act, Chapter 18, section 18.7-18.16). The legal nature and limitations of both U.S. and Dutch administrative penalty provisions are discussed at some length in sections 3.3.2 and 3.3.4 above, and will not be repeated here. It is important to repeat in this area that there are significant differences among the various U.S. environmental laws containing penalty provisions, and that, therefore, any choice among criminal, civil judicial, or administrative options must be informed by a careful analysis of the specific provisions that may be applicable in any given case.

5 THE FACTOR OF THE NATURE OF THE FACTS, EVIDENCE, AND SURROUNDING CIRCUMSTANCES FOR EACH CASE AFFECTING CHOICE OF OPTIONS

There are vitally important policy considerations that enter into the choice of enforcement options, as discussed above under the factor of the purposes or goals of enforcement, and there are also essential considerations relating to the legal and structural characteristics and limitations of the various enforcement options. Nevertheless, it is also important to remember that the specific facts and circumstances of each case will have a great deal to do with which enforcement option is best suited to the particular case at hand. One of the lessons that enforcement experience teaches is that every case much be considered in light of all the

information available about that specific case and that enforcement cases cannot be sorted into general categories with any ease. We recognize, therefore, that any discussion of the kinds of case-specific factors that affect enforcement will also be too general for immediate application to specific new enforcement cases. This paper does not attempt to provide any kind of exhaustive list of facts or circumstances that would determine whether a case is better suited for criminal, civil judicial, or administrative enforcement. Instead, we try to identify several examples of how the factor of case-specific facts, evidence, and surrounding circumstances can affect that choice.

5.1 Facts and Circumstances Affecting the Appropriateness of Criminal Enforcement

In general, the fact that the criminal sanction is the most severe also means that criminal cases need to be clearer and easier to prove in order to succeed. Both prosecutors and judges (and juries) are reluctant to threaten someone with the stigma of criminality or the threat of loss of liberty if the legal obligation at issue is unclear or if the evidence of failure to meet that obligation leaves significant open questions. Consequently, ambiguously worded regulations or permits can make it very difficult to pursue criminal enforcement even if the acts committed by the alleged violator are offensive and cause environmental harm. If the requirements of the applicable law are unclear and it is also not obvious that the acts involved caused specific environmental problems, then the case is even less well suited to criminal enforcement. This problem of poorly written standards, actual or apparent loopholes in permits, and similar uncertainties about the obligations of alleged violators has presented problems with enforcement, including criminal enforcement, in both U.S. and Dutch experience. As a result, both countries have increased their focus on improving the enforceability of laws, regulations, and permits. Extremely complicated or sophisticated legal requirements can also present a problem for criminal enforcement, where the judge and/or jury may feel that the requirements were sufficiently difficult to understand that the criminal sanction seems unduly harsh. A related problem arises when there are significant disputes between the government and the alleged violator about the proper interpretation of the applicable law. Although the existence of disagreement in legal position between the enforcing government and defendants in criminal cases is likely to occur in many cases, some of these disagreements will represent more difficult issues where the position of the defendant has some significant chance of prevailing in the courts. When the disputes over interpretation are of that type, the case may be better suited for civil judicial or administrative enforcement.

A problem related to the enforceability of the applicable law is the matter of whether the evidence gathered in investigations is properly aligned with the applicable legal standard. For example, are samples of emissions or substances at issue taken in the manner and using the test methods which match the definitions and specifications set forth in the law or permit? Does the evidence establish not only that certain acts occurred or failed to occur, but that the potential defendant is the person whom to law requires to act in the required manner? Under both Dutch and U.S. laws, certain requirements relating to both the obligation to obtain permits and to substantive requirements depend on the size of the operation or the volume of materials involved. Consequently, proof of the total volume of emissions, the amount of waste handled, or similar facts may be as essential to the case as proof that actions were taken in violation of the emissions standards or permitting requirements. If there is uncertainty about whether the evidence clearly establishes all of the elements of the offense, then the case may be poorly suited for criminal enforcement, where the burden of proof for the government may be greater as a matter of law, and where, in any event, the risk of the government's losing the case is probably greater because of the general tendency of criminal judges to exercise additional caution where criminality and/or loss of liberty are at stake.

One of the types of circumstances which can affect the suitability of criminal enforcement is the prior history of the involvement of the government with the potential defendant. On the one hand, a clear pattern of governmental interpretation and actions which should have assured that the violator knew of the requirements can be very helpful. On the other hand, a pattern of governmental awareness of the violations without definitive enforcement action or with only limited and variable enforcement response allows potential defendants to present an argument that the government actively condoned, either explicitly or implicitly, the violations. Whether or not this

argument is a sufficient legal defense, it certainly can make the case less appealing, especially for the imposition of significant criminal sanctions. As discussed in section 4.1 above, the ability to prove knowing or willful behavior may have legal significance for whether a crime has been committed and/or for the scope of available criminal sanctions. Even where this kind of proof is not specifically required, evidence of such behavior is helpful, especially in criminal cases. Generally, the legal standard for proving intent in environmental crimes in both the United States and the Netherlands is whether there was general intent, that is, intent to do the forbidden acts, rather than specific intent to violate the law at issue. However, the case is strengthened by evidence that the violator formed the intent for some personal or business gain, such as to make money or to obtain some favorable treatment. It is further strengthened if there is evidence that the violator was, in fact, aware of the legal requirements at issue. The strongest type of intent evidence would include evidence of specific intent, that is, premediated action for the purpose of evading the known legal requirements.

Finally, the choice of criminal enforcement may be affected by the extent to which the activities have caused and are continuing to cause environmental harm. The seriousness of the consequences of criminal acts is generally important in determining whether a case makes a good criminal case. In fact, where there are particularly serious consequences, other concerns relating to such things as clarity of the legal standard or prior governmental involvement may become less important. However, continuing environmental harm can present a problem for criminal enforcement in legal systems where the criminal law is not designed to fashion injunctions or other requirements relating to on-going environmental compliance. The differences between Dutch and U.S. criminal law in this regard are discussed in section 3.2.2 above. Where it is necessary to bring civil or administrative enforcement actions to address on-going environmental problems, the issue of whether to also pursue criminal enforcement must be considered. The result could be parallel civil and criminal enforcement, which introduces a number of complications into the exercise of enforcement choices. Decisionmaking about and management of parallel proceedings is beyond the scope of this paper, but, as we warned in the introduction, it is always important to bear in mind that enforcement choices can and sometimes should involve combining two or more enforcement options.

5.2 Facts and Circumstances Relevant to Differentiating Between Civil Judicial and Administrative Enforcement

All of the specific facts and circumstances discussed above relate to whether criminal enforcement is appropriate for cases involving certain issues. If those issues point away from criminal enforcement toward civil judicial and/or administrative enforcement, there may still be important case-specific facts or circumstances that favor one of these remaining options. Many of these will be closely tied to the legal characteristics of these two options, as discussed in sections 4.2 and 4.3. For purposes of this section, assume that we are comparing these two options under a system like that in the United States Resource Conservation and Recovery Act, where the administrative and civil judicial options are fully available and provide an essentially identical range of authorities and sanctions. With that assumption, it is possible to identify certain kinds of facts that can be significant in choosing between them.

Where the violations at issue are all in the past and there is no need for specific or detailed requirements for compliance activities, the simplicity and relative efficiency of the administrative approach has great appeal. Under these circumstances, considerations like the speed at which the matter can be resolved may not be as important as the overall transaction costs necessary to accomplish the government purpose, which is usually general deterrence, and in any event the administrative approach may also be faster. By contrast, a case involving on-going violations by a stubborn or intransigent violator may be much better suited for the civil courts, where the powers of contempt and/or general credibility and authority of the courts within the society may be necessary to alter the violating behavior.

6 THE FACTOR OF PRACTICAL REALITIES INFLUENCING THE CHOICE OF OPTIONS

Although the policy framework, the legal provisions, and the case-specific facts and circumstances all influence the choice among enforcement options, these factors cannot be considered in isolation from the very practical realities of the enforcement system in which the choices are being made. For example, a system cannot practically choose the criminal enforcement option with any frequency if there are not enough criminal prosecutors or criminal courts to handle the cases. Similarly, no system will want to make use of an enforcement option if the decisionmakers (i.e. courts) who will hear the cases under that option do not generally support the use of that option for environmental violations. Often these practical realities can be identified and addressed over the longer term. For example, the Dutch government has expanded the number of prosecutors so that both the existing and additional public prosecutors can devote more effort to environmental crimes. Both U.S. and Dutch enforcement authorities have worked to provide the courts with the cases and information in those cases which will allow the courts to understand the importance and suitability of such cases for enforcement in the courts.

One area of practical consideration which merits some further discussion here is the impact on choices which comes from the involvement of multiple agencies or institutions in the enforcement process. In both the United States and the Netherlands, civil judicial and criminal enforcement require the involvement of institutions outside the environmental agencies. In both systems, criminal enforcement decision-making and implementation is under the control of the justice ministries. In the United States, civil judicial cases are also referred to the Department of Justice, which provides the litigating attorneys who serve as lead counsel for the United States in the civil courts for environmental cases. In the Netherlands, the government must retain private counsel to represent it in the civil courts. These attorneys, generally referred to as the state's attorneys, are retained (and paid) in much the same way that private parties secure counsel to represent them in the civil courts. The involvement of these additional institutions and persons will increase the transaction costs of the enforcement choices which require their involvement. On the other hand, the use of these choices will provide for access to the additional resources and specialized expertise that these institutions and persons bring to the enforcement process. The effect of these considerations will tend to encourage the choice to limit the criminal and/or civil judicial option to the more significant or complex cases, although that is definitely not a necessary result. Indeed, there are currently a significant number of relatively minor environmental crimes being prosecuted in the Netherlands, probably because of the involvement of the regular police in environmental enforcement and the resulting high volume of direct enforcement activities originating from police and prosecutors, sometimes with little or no involvement of the environmental agencies. Similarly, where U.S. environmental statutes do not provide a viable administrative option for minor cases, as was until recently the case under the Clean Air Act, a number of civil judicial cases have been brought for relatively straighforward past violations and more modest penalties than is otherwise typical in civil judicial cases.

Resource constraints in general is the other practical consideration which merits some further discussion here. If the resources favor one type of option over the others, that factor alone will tilt the enforcement system toward that choice. If the resources to investigate or otherwise identify violations exceed the resources to follow through with enforcement responses, the system may respond by choosing the easiest or least costly option wherever possible. Alternatively, the availability of more cases than can be readily pursued may actually enhance the role of decision-making about enforcement choices because of the awareness that, when every case cannot be pursued, the choice of which to pursue and how becomes more important. In talking about resources, it is important to consider not only the number of persons or the amount of money which is directed toward each enforcement option, but also the nature of the skills, training, motivations, and experience of the personnel who are available. Again, if these elements of the resources tend to be significantly stronger for one option, there may be a tilt toward that option within the system. Finally, the relevant resources are not only those for enforcement personnel and institutions, but also for the courts or administrative processes where the enforcement cases are presented and resolved. If there are major delays caused by these kinds of resource limitations, an otherwise desirable enforcement option may be rejected.

7 CONCLUSIONS

The process of making choices among available enforcement tools or procedures involves several complex factors. An enforcement program seeking to effectively manage the process of choice among criminal enforcement, civil judicial enforcement, and administrative enforcement must prepare for such choices with a clear understanding of what goals or purposes govern the enforcement program. Based on that decision, the choices must also be informed by a full understanding of the legal and structural charactistics and limitations of each of the options as well as by an analysis of the facts and circumstances of each particular case that is the subject of the choice. A weighing of the impact of all these factors can result in the choice of the enforcement option(s) that are best for achieving the desired purposes and best for the case at hand, so long as any additional practical realities are also taken into account. This paper has identified the possible goals of enforcement and discussed how the choice of enforcement options is affected by the choice of goals. We have also attempted to illustrate the role played by legal structure, case-specific facts, and practical realities, drawing from enforcement experience in both the United States and the Netherlands. Although the actual process of such choices in other governmental systems will involve different legal structures and other differences, the analysis provided here for these two systems illustrates the complex process of enforcement choices at work. We hope that it will be useful to the enforcement programs of these two countries and that it will provide a basis for consideration of enforcement choices in other nations as well.

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THE ENVIRONMENTAL PROSECUTOR: THE EXPERIENCE OF A "CENTRAL COMMAND" THEORY OF ENVIRONMENTAL ENFORCEMENT

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PERSPECTIVE

The State of New Jersey, like most states in the United States, has a significant commitment of manpower and resources within the three primary components of its environmental enforcement effort. These include the administrative enforcement elements within the Departments of Environmental Protection and Energy (DEPE), Health and Labor, which are designed to secure broad-based compliance with reasonable and realistic regulatory programs through the use of easily administered fines and penalties; the civil enforcement area of the Environmental Protection Section of the Division of Law (DOL), which brings to bear the general civil remedies available in the state court system in the form of prohibitory and mandatory injunctive orders, as well as civil trial and penalty proceedings; and the criminal investigative section within the Environmental Prosecutions Bureau of the Division of Criminal Justice (DCJ), whose presence and efforts are most effective in deterring the repeat offender, the syndicated criminal, or others who engage in crime for profit or otherwise consider civil penalties as a cost of doing business. Additionally, the New Jersey State Police Marine Services Bureau and the Solid and Hazardous Waste Unit each have responsibilities which overlap the three primary enforcement components.

Each of these enforcement components utilize resources of varying degrees of intensity depending on the nature, extent and timing of the appropriate initiative or response. While each enforcement mode has the potential to be effective when used properly, each can be grossly ineffective and even counter-productive if used in an untimely or uncoordinated manner. In an effort to maximize the State's utilization of these resources, on January 24, 1990, Governor Jim Florio of the State of New Jersey, USA issued Executive Order #2 establishing the Office of the State Environmental Prosecutor (OSEP). The State Environmental Prosecutor (SEP) was charged with the responsibility for coordinating the use of these enforcement resources in order to maximize their efficiency and effectiveness and to create and integrate them into a comprehensive Statewide environmental enforcement program. Additionally, the SEP was required to personally prosecute those enforcement cases which involve either chronic environmental offenders, or situations which pose a serious threat to public health or the environment, as well as ensuring that these "priority cases" receive enhanced and expedited handling.

Steven J. Madonna was designated an Assistant Attorney General by New Jersey Attorney General Robert J. Del Tufo and appointed by Governor Jim Florio as the SEP. State Environmental Prosecutor Madonna and Attorney General Del Tufo organized the Office around a management core concept. Rather than attempt to create an additional bureaucracy in the enforcement effort, it was deemed more efficient to establish a management core to supervise and manage the existing resources of State Government in a more effective, coordinated fashion.

Housed in the State's Hughes Justice Complex, the office, totaling sixteen individuals, is staffed with the SEP, seven Assistant State Environmental Prosecutors, three Investigators, an Executive Assistant; and four support personnel. Thirteen of the sixteen staff positions were filled through reallocation of staff from other State agencies.

The remarks of Attorney General Del Tufo in the Foreword to the State Environmental Prosecutor's Second Annual Report summarize the unique role of the Environmental Prosecutor concept:

> "...the Office of the State Environmental Prosecutor is as unique and innovative a concept as it is new. Just completing its second year of operation, the office's

experience demonstrates quite clearly that State Government can be more efficient and effective by simply being more resourceful.

...with the mandate of the Executive Order that all departments and agencies cooperate fully with the State Environmental Prosecutor, the Office has been set up to function as a management core. It operates through, and in coordination with, the numerous State, county and local agencies, divisions and departments involved in the criminal, civil and regulatory environmental enforcement effort. Acting in this fashion, the Prosecutor not only oversees the prosecution of "priority cases," but also works to insure the coordination of initiatives, information exchange, and day to day enforcement activities. The Prosecutor has also overseen the creation of environmental units in County Prosecutors' Offices and works closely with them in enforcement matters. The Prosecutor is not restrained by the arbitrary limitations of the resources or jurisdiction of any given agency, division or department, nor has he any vested interest in highlighting or using the tools or resources of any particular agency, division or department. Herein lies the true uniqueness of the concept of the New Jersey Environmental Prosecutor. Faced with a significant 'environmental incident,' the Prosecutor has the unfettered discretion to coordinate the nature and timing of the most appropriate, efficient and effective enforcement response. Whether it be criminal, civil or administrative, or any combination thereof, whether it be State, county or local, the Prosecutor is free to exercise his judgment as to the nature and timing of the preferred response or responses. The ability to proceed in this "holistic" fashion avoids duplications of effort, contradictory theories of enforcement, and insures the full and proper utilization of our State Government resources, irrespective of the division or department in which they formally reside.

As described, the New Jersey Environmental Prosecutor is a position unique in the ranks of environmental enforcement."

1 COMPREHENSIVE STATEWIDE ENVIRONMENTAL ENFORCEMENT PROGRAM

1.1 State Agency Coordination

The first step in creating a comprehensive Statewide environmental enforcement program, one of the primary responsibilities of the SEP, was establishing a system of coordination of the initiatives, personnel, and resources of the various environmental enforcement Divisions and Departments of State Government. The SEP initiated the appointment of representatives within each of the Divisions and Departments to act as liaisons with the OSEP. Assistant State Environmental Prosecutors were likewise assigned to coordinate and manage the relevant enforcement activities of these various Divisions and Departments. They have also been instrumental in establishing working protocols of operation with their respective liaisons and agencies. The coordination of the use of the resources and personnel within these State agencies by the SEP is designed to maximize the efficiency and effectiveness of the State environmental enforcement program as a whole. This effort is being supported by a project to provide for computer linking and data access between the various Divisions and Departments of State Government.

In furtherance of this comprehensive program, coordination and supervision by the OSEP occurs daily in the context of the selection of the appropriate action and agency in a given case and in other non-case oriented initiatives. These include:

1.1.1 Voluntary Audit/Compliance Program

In an effort to instigate more responsible environmental practices within the State's business and industry community, the SEP has proposed a Voluntary Audit/Compliance Program. Drawing upon widely accepted environmental principles, the SEP, working with the Division of

Criminal Justice, the Division of Law, the Department of Environmental Protection and Energy, and the County Prosecutors, and with comments from various responsible practitioners and members of New Jersey business and industry groups, has drafted a checklist of desirable business practices which experience has shown will have a positive impact on the pollution prevention effort. The program provides that the implementation and responsible operation of these business practices could benefit and assist a business in the event of an unforseen environmental "incident" which may normally carry criminal ramifications. These business practices are to be incorporated as factors to be promulgated by the State Environmental Prosecutor, the Attorney General, and the Director of the Division of Criminal Justice, as a guidance document to be considered by the State's prosecutors when making decisions on whether or not to charge an environmental crime, the nature of the charges, and the identity of the defendants.

It is the belief of the State Environmental Prosecutor that broad-based implementation and operation of such programs are essential components of a successful pollution prevention effort and the protection of our natural resources.

1.1.2 Clean Harbors and Rivers Task Force

The upgrading of offenses relating to crimes impacting on the waters of the State of New Jersey along with the inclusion of the new statutory concept "significant adverse environmental effect," are key components of the recently enacted New Jersey Clean Water Enforcement Act. With these new tools, the SEP has established a multi-agency task force dedicated solely to coordinated criminal enforcement of New Jersey's clean water statutes. This task force has, as its primary responsibility, the coordinated investigation and prosecution of alleged incidents of criminal water pollution in a manner which will insure the diligent, but reasoned and uniform, use and interpretation of the new statutory provisions.

1.1.3 Solid Waste Enforcement Initiatives

The OSEP organized a joint effort by the State Police and DEPE for a one week period in April to pursue forfeiture actions against solid waste transporters hauling solid waste from a solid waste transfer station in Newark in violation of State licensing laws. During the around-the-clock operation, would-be transporters were informed that they were subject to possible vehicle seizure and forfeiture actions if they hauled the waste in violation of A-901 screening procedures and truck licensing requirements. As a direct result, the gypsy haulers ceased their illegal operations.

The OSEP continued to coordinate efforts on behalf of the New Jersey State Police Hazardous Materials Unit and the Solid Waste Division of the DEPE to insure the safe, environmentally sound and legal movement of solid waste over the State's highways. Through a continuing series of vehicle checkpoints in different areas of the State, approximately 2,300 violations have been detected. Appropriate citations were issued and approximately 35 solid waste vehicles were placed out of service since the implementation of this initiative in 1990.

1.1.4 Scrap Tire Initiative

The OSEP continues to pursue an initiative designed to address the blight of used tires that are piled up at various sites throughout New Jersey. The impetus for the initiative resulted from a tire fire that raged at a site in Jersey City, New Jersey, in 1991, sending acrid smoke into the air for hours and interrupting the flow of traffic on a major north/south interstate highway.

DEPE, at the urging of the SEP, has undertaken a survey of the locations, quantities, and site characteristics of the worst tire dumps in the State. To date, eleven sites have been identified and inventoried, accounting for more than 7.5 million tires. The majority of these abandoned tires are located on lands situated over the pristine Cohansey Aquifer of the Pine Barrens. The results of the survey will serve as the basis for the development by the State of an enforcement/remediation strategy with respect to these sites. The OSEP is working with the DOL and the DCJ to review the facts and circumstances which gave rise to the tire site accumulations

and to consider enforcement actions against those responsible for creating this menace. Further, the OSEP has notified State and local law enforcement authorities of the potential fire problem inherent in tire site accumulations and of the need for increased vigilance.

1.1.5 Pinelands Initiative

The OSEP has recently joined forces with the Pinelands Commission in an enforcement initiative designed to protect and preserve the natural beauty and resources of the Pinelands. An Assistant State Environmental Prosecutor has been assigned with the primary responsibility to assist the Pinelands Commission in the development and prosecution of civil and criminal environmental cases occurring within their jurisdiction. This Assistant State Environmental Prosecutor will meet on a regular basis with staff of the Pinelands Commission to prioritize enforcement matters and insure that they are given appropriate attention. In furtherance of these efforts, the OSEP is working closely with the county prosecutors and State and local law enforcement authorities in the seven counties in which the Pinelands Reserve is located to prosecute environmental crimes.

1.1.6 Racetrack Initiative

As a result of continuing problems with water quality in waterways adjacent to horse racetracks in New Jersey, the OSEP initiated discussions and efforts aimed at instituting interim procedures and permanent solutions regarding racetrack manure handling practices. The aim of this process has been to have appropriate temporary and permanent pollution control strategies implemented by the racetracks. This will minimize, if not eliminate, the contamination of the adjacent waters by manure-contaminated runoff.

1.1.7 Direct Sewage Discharge Initiative

The OSEP continues coordination of the efforts of the Marine Services Bureau of the New Jersey State Police, various County Health Departments and the DEPE to end direct discharges of business and household sewage and waste into various waterways, bays, and shellfish breeding areas of the State of New Jersey. Since the implementation of this initiative in 1990, 399 summonses have been issued by the Marine Police to cease such discharges. Efforts are likewise underway to address remediation alternatives with local sewage authorities and county and local health officials.

1.1.8 State Agency Compliance

The OSEP initiated a project that will inventory and make recommendations regarding compliance problems at State facilities. This project will include the distribution of a request for information to all agency heads to inventory known environmental problems along with proposed solutions. The resultant information will provide the basis for a complete analysis of the scope of this problem. With this information available, it is expected that the Administration will be in a position to define the measures necessary to result in the State becoming a model of environmental compliance.

1.2 County Coordination

One important component of the SEP's Statewide environmental enforcement program is an increased emphasis on county agency enforcement. (The State of New Jersey is divided into twenty-one regional units of government called counties.) The county prosecutors' offices and county health departments have been designated as the core of the county component of this network. They are looked to as the catalyst in each county for the formation of county environmental enforcement task forces, consisting variously of county Hazmat Teams, county sheriff's departments, departments of public works, emergency services departments and the like.

As the focal point of county level enforcement activity, they will be the immediate point of contact and coordination with the OSEP. As currently operating, information and case referrals move routinely between the OSEP and the county components.

In 1991, the OSEP completed the training of at least one assistant prosecutor and one investigator from each county, and has since begun training newly assigned personnel with classroom and field instruction. Likewise, in 1991 the OSEP arranged for a four day County Health Inspectors Training Course to sensitize these individuals to the relevant procedures and operations of the criminal justice system, and the signs and symptoms of criminal conduct. Although all twenty-one counties have basic environmental enforcement capability, eighteen counties are effectively operating environmental crimes units, twelve coming into existence in the last year. Two Assistant State Environmental Prosecutors have been assigned to work exclusively on the operation and further development of these county environmental enforcement components. They are responsible for providing the county prosecutors with assistance, including the necessary technical and legal support to properly investigate and prosecute environmental crimes cases; designating and assisting with the investigation and prosecution of county level priority cases; and providing complementary civil and regulatory support when necessary.

1.3 Local Component

Local agency involvement in the overall environmental enforcement effort is critical to its success. It is the everyday responsibilities of the local police officer, fire inspector, code and health enforcement officers that provide the opportunity to observe the signs and symptoms of unlawful environmental practices. In order to identify the proper agencies to make up the local enforcement component, the SEP has been and continues to meet with various agencies of local government, as well as organizations such as the Association of New Jersey Environmental Commissions, North Bergen Volunteer Health Officers, the Passaic River Coalition, the Statewide Association of County Health Officers, the Morris County Safe Neighborhood Group and the New Jersey Environmental Federations to review and evaluate the possible options.

1.4 Federal/Interstate Coordination

A Statewide comprehensive environmental enforcement program will invariably have aspects of enforcement that must be coordinated with adjoining states and various federal agencies. In this regard, the SEP was designated by Executive Order #2 to be the State's liaison to other states and federal agencies and accordingly has routine discussions with the United States Attorney, the EPA Headquarters and Regional Administrator, and representatives of the adjoining states and their representatives in the Northeast Hazardous Waste Project.

The SEP serves as a member of several national level environmental committees and working groups - the EPA Steering Committee on Federal/State Enforcement Relationship, the EPA Advisory Council of the National Enforcement Training Institute and the Environmental Committee of the Council of State Governments. The SEP, working with the United States Attorney and the EPA Regional Administrator, are forming the New Jersey Federal/State Environmental Task Force. This unique project is proposed to include representatives from the Federal Bureau of Investigations, the United States Environmental Protection Agency, the United States Coast Guard, and the United States Attorney's Office and New Jersey representatives including the SEP, the DCJ, the DEPE and other State and county support agencies, as needed. It is designed to provide a forum for the coordination and investigation of environmental enforcement cases that have a national or regional significance.

1.5 Public Education and Outreach

The SEP considers public involvement a critical component of the comprehensive statewide environmental enforcement network both in terms of detection and prevention. For this reason, the OSEP has placed a high priority on the need to respond to requests for information and invitations from citizens, community groups and business/professional organizations to

participate in various events. These events have provided the OSEP with opportunities to promote more responsible personal and business environmental practices and to familiarize individuals and groups with the consequences of irresponsible environmental practices, the need for public involvement in detection and prevention, and the role and strategy of the OSEP in the New Jersey environmental protection effort.

To facilitate formal citizen involvement and to underscore its importance, the Governor and the State Environmental Prosecutor announced on September 19, 1990, the implementation of the Information Awards Program. This program was designed to provide a cash award to citizens for information that result in fines or penalties from the illegal disposal or ocean dumping of solid, medical, hazardous, or low-level radioactive waste. disposal or ocean dumping.

2 ENVIRONMENTAL TRAINING PROGRAMS

In addition to training courses sponsored for county prosecutors' attorneys and investigators, and county health inspectors, the OSEP planned and sponsored training programs throughout the year for Marine Police personnel, the then Board of Public Utilities investigators, sheriffs officers, and local fire, police and health officials. Additionally, a program has been initiated by the OSEP with the Police Training Commission and the Division of Criminal Justice to incorporate an environmental crimes component within the police training academies.

3 STATE PRIORITY CASES

One of the primary responsibilities of the SEP is the identification, investigation and prosecution of civil, criminal and administrative priority cases. Whether identified on the State, county or local level, priority cases are, by definition, those which have an unusually great potential to adversely impact on the health and safety of our State's citizens, and the quality of our environment. For this reason, the SEP is charged with the responsibility to handle, or oversee the handling of, these priority matters and to insure that there is the necessary commitment of personnel and resources to exact an expeditious and conclusive resolution. Working with and through the DCJ, the DOL, and the DEPE, the OSEP's efforts have resulted in indictments, convictions, sentences, administrative enforcement actions, civil actions, Court orders, penalties, fines, assessments, and debarments, the highlights of which follow:

3.1 Ciba Geigy - Ocean County

After more than seven years of litigation, the SEP successfully coordinated a record breaking global resolution of the Ciba-Geigy litigation, highlighted by criminal pleas to violations of the New Jersey Clean Water Enforcement Act by the corporation and the two indicted middle-level managers. This criminal/civil/administrative resolution package of not less than $63.5 million could easily become a $75 million package over the next ten years. Resolving the indictment, civil penalty action, and other issues involving the disposal of hazardous/chemical wastes in Cell 2 of their lined landfill, Ciba-Geigy will pay a $5.5 million civil fine, $3.5 million criminal fine, $2.5 million contribution to purchase wetlands in the Toms River basin, reimbursement of the State's expenses in excess of $2 million, and the establishment of a $50 million cleanup fund. In what are yet unliquidated costs to the company, Ciba-Geigy has agreed to install a state-of-the-art cap on Cell 1 to reduce leachate production to a virtual zero; increase the monitoring wells and testing at Cell 1; remove and dispose of the Cell 2 liner as a hazardous waste, and close Cell 2; continue pumping, treating, and re-injecting the Cardinal Drive pollution plume in perpetuity or until the pollution is removed; all of this to be accomplished under the paid oversight of the DEPE. This resolution represents a landmark coordinated criminal, civil, and administrative environmental enforcement package.

3.2 Exxon Company, U.S.A.

The SEP successfully coordinated the global resolution of the criminal and outstanding civil issues involving the January 1, 1990 Exxon inter-refinery pipeline rupture. Culminating a 12-month criminal investigation by the SEP and the Division of Criminal Justice, Exxon, the world's largest corporation, pled guilty to a criminal negligence violation of the Federal Clean Water Act on March 20, 1991. Concurrently, a civil agreement was reached, also culminating the lengthy mediation process by the SEP and the Division of Law. The direct efforts of the SEP working with the Divisions of Criminal Justice and Law resulted in the payment of an additional $15 million in criminal and civil fines and penalties, as well as reimbursement for natural resource damages to the States of New Jersey and New York and the Federal Government ($5 million in criminal fines and penalties and approximately $10 million to natural resource damage). This was in addition to the prior recoupment of $18 million for containment and spill cleanup costs, $25 million for a Marine Operation Study and the costs of the implementation of the preventive recommendations, and $661,000 for a preliminary natural resource damage study thus bringing the entire resolution package to $59 million. Additionally, the agreement imposed strict controls over the reopening and reuse of the pipeline and required training and procedures incident thereto.

3.3 White Chemical Co. - Essex County

In April of 1990, this Office learned of potentially catastrophic conditions at the facilities of White Chemical Co. in Newark, including the presence of approximately 8,000 rusting drums of hazardous chemical on site. The execution of search warrants in May of 1990, developed evidence which resulted in the State Grand Jury returning a five count indictment in December, charging White Chemical Co. and its president and owner, James W. White, each with crimes of the second, third, and fourth degree. The case is currently pending trial.

As a result of information gathered at the scene, the SEP was able to expedite the issuance by the DEPE of a Spill Fund Directive which allowed the State to begin the immediate stabilization of the most dangerous threats at the site. During the next five months, DEPE removed, repacked and/or segregated significant quantities of the most dangerous substances. DEPE's actions taken pursuant to the initiative of this Office resulted in a substantial reduction in the risk posed by conditions at the site. EPA has taken over final remediation of the site.

3.4 HUB Recycling, Inc.

The OSEP, operating with the Division of Criminal Justice, returned a 19 count indictment charging HUB Recycling, Inc. of Newark and its operators and affiliated companies with a range of environmental and financial crimes arising from the operation of an illegal dump at the HUB site in Newark. Purportedly a recycling facility, HUB allegedly accumulated over 105,000 tons of debris under Interstate 78, which was ignited into a fire that raged through the materials, and resulted in the intense heat warping the girders of the overpass. A civil suit to recoup money damages was subsequently initiated by the OSEP in cooperation with the Division of Law.

3.5 Hagaman Site - Ocean County

After more than five years of futile litigation by Lakewood Township municipal enforcement authorities who attempted to halt and remediate hazardous accumulations of solid waste at the Hagaman site, this case was declared a priority by the SEP in 1991. The SEP promptly obtained an initial injunction in the Ocean County Superior Court prohibiting Hagaman from operating at the site, and allowing the DEPE exclusive possession of the site for the purpose of conducting site stabilization and cleanup.

3.6 Warren County Garage

Information referred by the OSEP to the DCJ and the Warren County Prosecutor's Office resulted in the initiation of an investigation into allegations that 55 gallon drums of hazardous waste were buried by county employees at the Warren County Garage. The SEP designated the matter as a priority and coordinated the joint agency investigation which culminated with the return of an indictment against a supervisor in the Warren County Road Department on March 12, 1992, charging him with Release and Abandonment of Hazardous Waste and Toxic Pollutants. The same Grand Jury also prepared and released a presentment which reflected the general principle that government should set the example for private industry in the environmental protection effort. It expounded the simple but innovative recommendation that county government should establish the position of "Environmental Compliance Officer" with the primary responsibility insuring that county government facilities, operations and personnel are functioning in rigid compliance with all applicable environmental statutes and regulations. It also noted that the first responsibility of this new officer should be to conduct a county-wide environmental audit, including an inventory of the historic and present environmental compliance status of all facilities, equipment, operations, and employee practices for purposes of remediation and budgeting.

3.7 National Waste Disposal - Mercer County

In a case that resulted in the largest penalty awarded after an Office of Administrative Law hearing, the OSEP took the lead in prosecuting four administrative complaints by the DEPE against National Waste Disposal, Inc., a solid waste and hazardous waste collector based in Mercer County. The claims against National Waste involved the operation of several illegal solid waste facilities, unlawful storage and transfer of asbestos, violation of State waste flow directives, and failure to transport hazardous waste to the appropriate disposal facilities.

Following thirty-one days of evidentiary hearings in the Office of Administrative Law, Administrative Law Judge Joseph Fidler found that National Waste violated the Solid Waste Management Act on over three hundred occasions. Judge Fidler recommended an assessment of $6,000,000 in penalties against National Waste, a revocation of National Waste's licenses to collect solid and hazardous wastes, and a debarment of the owner from future operations in the solid and hazardous waste industries.

3.8 Northeastern Recycling - Bergen County

In response to numerous complaints from the Borough of Hillsdale in Bergen County regarding an unlicensed solid waste facility operating under the guise of a recycler, the OSEP in cooperation with the DOL, drafted and coordinated the issuance of an Administrative Order by the DEPE against Northeastern Recycling Co., assessing $3,750,000 in penalties and ordering cessation of operations. When Northeastern ignored the Administrative Order, the OSEP filed a complaint in the Superior Court which resulted in the entry of a judicial consent order, which permanently barred the defendant's operation of the unlicensed facility. The Order further provided that the DEPE could continue to prosecute in the Office of Administrative Law the claim for penalties for the unlicensed solid waste facility operation.

3.9 United Wood Recycling - Hudson County

United Wood Recycling of Jersey City was a sham wood recycling operation, which accumulated a mountain of wood and other ignitable wastes stretching approximately 900 feet long, 100-125 feet wide and 20-25 feet high. The local fire officials had declared it an imminent fire hazard and had tried unsuccessfully on numerous occasions to shut down the operation and stabilize the fire hazard. The OSEP, noting the futility of the State and local administrative enforcement efforts, declared the matter a priority case and, working in cooperation with the DOL, initiated a civil injunction action in the Hudson County Superior Court. The Honorable Robert Tarleton ordered the facility closed, and the operators and property owner to take immediate

steps to stabilize the site and remove the accumulated waste material. The waste materials at the site have since been removed and sent to authorized facilities and the operation has been permanently shut down. In a separate administrative proceeding, the DEPE in conjunction with the OSEP, issued an Administrative Order and Notice of Civil Penalty Assessment wherein United Wood was assessed a civil administrative penalty of $140,000. This matter will be prosecuted in the Office of Administrative Law.

3.10 Diamond Hills Estates Sewage Treatment - Warren County

The OSEP received information that the Diamond Hills Estates sewage treatment plant located in the Township of Mansfield consistently discharged pollutants into the Hance's Brook in violation of the terms and conditions of its permit. The OSEP working with the DEPE, not only initiated enforcement actions seeking a total of $1,657,062 in penalties from the corporate operator, but has also initiated a search for a viable alternative to the continued operation of the plant by this corporation.

3.11 Debarments

3.11.1 Solid Waste and Recycling Industry

Six principals and three employees of five New Jersey solid waste carting firms were debarred, in most cases permanently, from engaging in the solid waste collection/disposal and recycling industries in New Jersey as a result of settlement agreements finalized in conjunction with the OSEP. Concluding some seven years of litigation in this restraint of trade prosecution originally initiated by the Board of Public Utilities, this resolution of the case underscores the commitment of the SEP to remove undesirable elements from the State's waste/recycling industry.

3.11.2 Jersey Carting - Bergen County

The OSEP declared as a priority and successfully litigated in the OAL an administrative prosecution initiated by the former Board of Public Utilities against Jersey Carting and its principals. Administrative Law Judge Diana Sukovich issued an Initial Decision in this matter recommending that the owners of Jersey Carting be debarred from the solid waste industry and pay a civil penalty of more than $100,000, and that their license to haul solid waste be revoked. Judge Sukovich's decision was based on Jersey Carting's repeated violations of State solid waste flow directives requiring certain billing disclosures to customers. The Initial Decision has been forwarded to the DEPE Commissioner for Final Decision.

3.12 Interstate Recycling, Inc. - Union County

In October 1990, the OSEP, working with the DOL, successfully secured from State Superior Court Judge Frederick C. Kentz, Jr., a permanent injunction closing down a solid waste facility in Hillside, operating as a sham recycling center. During the latter part of 1991, the OSEP litigated the penalty portion of the proceeding for nine days in the Superior Court of New Jersey, Chancery Division and successfully secured the award of a $175,000 penalty to the DEPE for the illegal operation.

3.13 Standard Tank Barge Cleaners - Hudson County

Over the past several years, Standard Tank of Bayonne had gained notoriety as a persistent and recalcitrant polluter of the State's waterways. In actions initiated by the OSEP with the DOL in the New Jersey Superior Court last year, Standard Tank was enjoined from further violations of its NJPDES permit and from illegally storing millions of gallons of contaminated wastewater in four barges at Standard Tank's Bayonne facilities. In June 1991, under the

direction of the OSEP, the DEPE issued to Standard Tank a final termination notice of its water discharge permit and a denial of air permits for boilers used to incinerate hazardous waste. These additional steps further solidify the position of the OSEP and the DEPE that this formerly blatant polluter will not be allowed to continue to operate in New Jersey in disregard of the environmental laws. As a result of these enforcement initiatives, Standard Tank is currently operating under severe restrictions, which prevent it from discharging anything into the waterways.

3.14 Engineered Precision Casting Company - Monmouth County

The OSEP became involved in a matter in which Engineered Precision Casting Company and its two principals were assessed $4,450,000 in an Administrative Order by the DEPE for numerous violations of the company's water discharge (NJPDES) permit. This matter is of significance in that it is the first action brought by the DEPE seeking to hold responsible corporate officials liable for the violations of the company. Working with the DOL, the OSEP was successful in arguments to the Administrative Law Judge, later confirmed by the DEPE Commissioner, that the Water Pollution Control Act allows for responsible company individuals to be held liable for the environmental misdeeds of the company.

3.15 CPS and Madison Industries - Middlesex County

Longstanding industrial activities by CPS Chemical Company and Madison Industries in Old Bridge Township resulted in pollution of the aquifer underlying the Runyon Watershed, ultimately threatening the Perth Amboy water supply wells. As we reported last year, the SEP, within six months of his involvement, was able to end ten years of maneuvering and technical delays and secure the implementation of the first phase of the cleanup - the initiation of pumping. Throughout 1991, the OSEP, the DEPE, and the City of Perth Amboy have continued their concerted efforts, this time aimed at preserving valuable water supplies by the implementation of a groundwater recharge program. At the same time, their efforts have been directed at the companies to undertake soil studies designed to identify any lingering sources of contamination and the ultimate remediation of the condition.

3.16 Noble Oil - Burlington County

Noble Oil Corporation, located within the Pine Barrens of Tabernacle Township, is a waste oil processor with significant illegal discharges, on-site contamination and ongoing operational problems. Enforcement efforts against this company have been undertaken by the State in various forums without significant success for over a decade. Designated a priority case of the OSEP, a joint State/local enforcement action brought in the New Jersey Superior Court against this waste oil dealer resulted in a judicial liability determination and an interim injunction against the use of certain facilities, and a Court Order requiring the company to pay for a cleanup study. A temporary shutdown of the facility was ordered by the Court pending Noble's posting of a bond to pay for an investigation of pollution at the site. The study and litigation continue.

3.17 Texas Eastern Transmission Pipeline Company - Various Counties

The OSEP working with the DEPE, brought to a successful resolution a cleanup/penalty action initiated against Texas Eastern Transmission Pipeline Company with respect to PCB contamination at its three compressor stations in New Jersey (located in Hanover, Linden and Lambertville). The penalty action was resolved in September 1991 for $1 million dollars ($850,000 in penalties and $150,000 in administrative costs) payable in three installments over two years. Likewise, the clean up of the contamination was undertaken by Texas Eastern at its expense pursuant to an ECRA Administrative Consent Order.

3.18 Cardile Property - Cape May County

In the Spring of 1991, the OSEP learned that numerous enforcement actions taken over the past three years by no less than three separate Divisions within DEPE had failed to deter a chronic offender from continuing illegal solid waste dumping and coastal wetland filling activities in an area directly adjacent to the Grassy Sound in Cape May County. The OSEP quickly brought the various enforcement staffs together, consolidated all the violations and obtained a permanent injunction in the Superior Court, not only restraining this offender from further violations, but also requiring the defendant to develop a plan of remediation and to implement the terms of the plan at his expense. Penalty aspects are pending.

3.19 Saudi Diriyah - Cumberland

The OSEP was notified by the State Police Marine Bureau that they had retrieved a plastic bag of solid waste from the Delaware Bay, which was directly traceable to a Saudi Arabian registered vessel which had recently passed through that area. After researching the best legal sanction for this type of violation, the OSEP contacted the Coast Guard and proposed a cooperative prosecution under the MARPOL Protocol which implements the "International Convention for the Prevention of Pollution from Ships." On the basis of the evidence secured by the State Police Marine Bureau, the Coast Guard was able to assess a civil penalty of $20,000 against the owner of the vessel - the first such MARPOL prosecution undertaken by the Coast Guard operating out of the Philadelphia Port. As a further part of the resolution package, the owners equipped the vessel with an incinerator, gave written warnings to the subject vessel and master that reoccurrence of the violations will not be tolerated, and sent letters regarding compliance with MARPOL regulations to all of their other vessels.

3.20 Secaucus Municipal Utilities Authority

A series of illegal connections to the Secaucus Municipal Utilities Authority ("SMUA") made by a variety of high-usage commercial developers who were improperly sanctioned by the SMUA were brought to the attention of this office. The OSEP expended significant hands-on efforts to resolve the matter in an expedited fashion. This resulted, on August 31, 1990, in the entry of a consent judgement by Judge D'Italia, Hudson County, settling the matter. Fines in the amount of $1.52 million (the largest penalty ever collected in a single action under the New Jersey Water Pollution Control Act) were assessed against the SMUA for allowing illegal connections and against the illegal connections. The fines are scheduled to be paid over the next three years. In addition, sewage system improvements in the $400,000 range will be performed by Hartz Mountain, Inc. as a result of the settlement. This case highlights the effectiveness of the SEP concept. By being able to marshall all of the appropriate information and devote a significant amount of time to a case over a short period of time, a very large penalty was obtained. Furthermore, the resources of the NJDEP and the Division of Law, while used extensively during the negotiations of the settlement, will not be required in lengthy litigation.

3.21 Criminal Sentences

Working with and through the Division of Criminal Justice, and the County Prosecutors' Offices, the OSEP has meted out almost 27 years of incarceration against 17 defendants during the first two years of its existence, yielding an average of over 1 and 1/2 years of jail time per defendant. Examples of particular sentences include the following: the president and vice president of a New York international trading company were sentenced to three years each in State Prison for the illegal storage and abandonment of hazardous waste; a laboratory employee was sentenced to thirty days in the county jail and three years probation for the abandonment of bags and boxes of medical waste; a company executive was sentenced to two hundred days in the county jail and three years probation for the unlawful discharge of oil based products containing PCBs, which could have flowed into the State's waters; an owner of a surplus supply company

was sentenced to 180 days in jail and five years probation for his role in the release, abandonment and storage of hazardous wastes (toluene, ethyl, benzene, mercury, lead, chromium, etc.), along with creating the risk of widespread injury; the owners of an auto salvage company were sentenced to 300 days and 150 days in the county jail, respectively, for their roles in the dismantling of an oil tanker containing petroleum residue and other pollutants which were discharged into the ground; the owner and employee of an auto body shop were sentenced to nine months and six months in the county jail, respectively, for their roles in the illegal transportation and disposal of hazardous waste; an unlicensed hauler was sentenced to five years in State Prison after being convicted of the unlawful transportation and disposal of hazardous waste; the President and an employee of a graphics company were sentenced to a year less a day and 6 months in the county jail, respectively, for their roles in abandoning drums of hazardous waste in adjacent counties; and a property owner was sentenced to five years in State Prison for releasing a toxic pollutant, illegal landfilling, and illegally operating a solid waste collection business.

4 CONCLUSION

The appointment of a State Environmental Prosecutor in New Jersey has had a significant positive impact on the environmental enforcement effort in the State. The utilization of this "central command" theory of enforcement has replaced the uncoordinated and often times ineffectual efforts of the past with calculated and coordinated enforcement initiatives. No longer are the components of the New Jersey enforcement effort uninformed or ill equipped to respond to day to day challenges.

The coordination of the various enforcement arms of the State agencies into one command has permitted the State to maximize the use of its personnel and resources in the form of joint agency initiatives and diligent and effective prosecutions.

This has led to previously unparalleled successes in the enforcement of New Jersey's environmental laws. Chronic polluters and offenders have been systematically neutralized to the end that compliance is the rule and not the exception.

The State Environmental Prosecutor has methodically molded the numerous State, County, and local enforcement elements into a comprehensive environmental enforcement "machine", with institutionalized lines of communication and protocols of operation. Relevant information is introduced into the system and allocated to appropriate levels and components of the program. Civil, criminal and/or regulatory responses are informed, measured, and coordinated to insure the most effective and efficient response.

Priority cases are prosecuted from a position of strength, with the necessary complement of information and resources. Potentially volatile environmental issues are moved through the courts with the dispatch necessary to avoid a repetition of the, at times, "catastrophic" consequences of the past. Reasoned, diligent, and effective prosecutions are the hallmark of New Jersey's new "centralized command" approach to environmental enforcement. Responsible environmental practices within the regulated community are the result.

THE APPLICATION OF CRIMINAL LAW INSTRUMENT IN THE ENVIRONMENTAL LAW ENFORCEMENT

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1 INTRODUCTION

1.1 Indonesian Environmental Legislation

The Stockholm Declaration on Human Environment (1972) also triggered the Indonesian government to develop an environmental management policy and to materialize the environmental protection programs in line with the policy. Nevertheless, it was not until 1978 that the Ministry of Environment came into being. Four years later the 1982 Environmental Management Act was promulgated. This Act is intended as the "umbrella provisions" under which the future Indonesian environmental legislation will be drafted.1

It does not mean, however, that prior to 1982 there were no legislation dealing with the environmental protection, environmental management, and environmental enforcement.

Munadjat Danusaputro, the first Indonesian Professor of Environmental Law, divides the Indonesian environmental legislation into the classical type and the modern one. Whereas the classical type consists of laws and regulations promulgated during the Dutch colonial time, the modern type consists of laws and regulations enacted after getting the independence.2

The first type is rigid, sectoral, and consumption oriented,3 such as reflected inter alia in the 1920 Fishery Conservation Ordinance, the 1926 Nuisance ordinance, the 1931 Wild Animal Ordinance, the 1936 General Water Regulation, and the 1941 Nature Protection Ordinance.

The second type is flexible, integrated, and environmental oriented,4 such as found inter alia in the 1948 Cities Planning Ordinance, the 1960 Health Basic Act, the 1964 Atom Energy Act, the 1973 Continental Shelf Act, the 1982 Environmental Management Act, and the 1990 Conservation of BioNatural Resource Act.

Equally important, criminal provisions relating to environment have been sporadically prescribed in the 1915 Indonesian Penal Code. For example, articles 202, 203, 204, and 205 stipulate the protection of human health; articles 172 and 502 stipulate the nuisance; and article 302 and 540 stipulate the protection of animals. Still, in case of these penal code offences the attention is focused on the offender or the sanctioned conduct not on the interest of environmental protection or environmental management.5

1.2 Environmental Law: Revisited

Since the time of Hammurabi men have searched the meaning of law. Yet what Kant indicated not less than two hundreds years ago remains unchained: "Noch suchen die Juristen eine Definition zu ihrem Begriffe von Recht."6

It is not easy indeed to find a definition of law that would meet the satisfaction of all jurists. The same is true of formulating the meaning of environmental law. For the purpose of writing this work paper only one definition has been chosen. It says that environmental law is part of the law dealing with physical environment and it is applicable to prevent or to overcome the problems of environmental pollution, environmental exhaustion, and environmental damage.7

According to this definition, the environmental law deals only with the physical environment, or the physical surroundings of men. It does not deal with the social environment, or the relation between men and their surroundings.8 Hence, the Indonesian environmental law does not deal, for example, with the so called "cultural pollution" of Bali Island caused by the continuing influx of foreign tourists.

The meaning of environment for men, on the other hand, may be found in the quality of environment. This environmental quality has some relations with the environmental value for human health and safety, with the environmental value for a variety of utilizations, and with the environmental values themselves detached from particular utilizations.9

Also, we should mention environmental problem. This problem is a social phenomenon too and not mere a natural science one. As a result, the environmental problem deals also with social phenomena such as population growth, migration, and social behaviour in the forms of producing, migration, and recreating.10

We may say that the environmental problem is the deterioration of environmental quality. This deterioration may be seen in the forms of environmental pollution, environmental exhaustion, and environmental damage.11

1.3 The Function of Environmental Law

Functionally, the environmental Law provides the norms for the positive side of social behaviour. The norms may directly command or prohibit the society. However, the environmental law often provides norms indirectly. That is quite true when it gives a ground upon which the authorities provide norms to the regulated persons.12 In the meantime, the existence of a good environmental law is not a guarantee for a good environmental quality. Some more factors such as education, technics, and financial incentive are needed to gain that quality.13

1.4 Environmental Oriented Development Concept

Within the context of Indonesia the function of environmental law is to guard and to champion the policy of the environment oriented development concept,14 or to stimulate further economic growth without permanent damage to environmental quality. The time is due for the Indonesian people to reach the goal of "sustainable development", or "the development that meets the needs of the present without compromising the ability of future generations to meet their own needs.15

2 ENVIRONMENTAL LAW ENFORCEMENT

2.1 Cross Section of Legislations

Despite its modern characteristic, the present environmental legislation also proofs to be an intricate one. Environmental legislation is indeed a cross section of a variety of laws,16 such as constitutional law, administrative law, civil law, criminal law, and tax law as well.

The constitutional law describes the public organizations and its powers to apply and to enforce the environmental law. The administrative law regulates the environmental policy and environmental standards such as the system, the procedure, and the control of licensing. The civil law provides remedies for obtaining compensation for environmental damage. The criminal law provides coercive norms under which the people obey the environmental law. And the tax law may be violated in case there is any infringement of environmental laws motivated by economic but illegal goal.

2.2 Environmental Regulatory Chain

The environmental law may be enforced by two methods. Monitoring compliance through negotiation, licensing, and control is the preventive method. On the other hand, sanctioning against violations through administrative law, civil law, or criminal law instruments is the repressive method.17

Thus, environmental law enforcement may be understood as:18

to mean the observance of the environmental law through supervising and inspection, as well as the detection of violations of that law, the reparation of the environmental damage it has caused and taking legal action against the offender(s).

Enforcement is generally the weakest link in the regulatory chain of any government environmental policy plan. The process cycle of the plan consists of legislation, standard setting, licensing, implementation and enforcement. The movement of the cycle is continuing and the feedbacks of enforcement become beneficial inputs for the legislation process. To tell the truth, adjustment and correction of environmental legislation would be more successful if it is based on the experience obtained in the enforcement process.19

Particularly, in Indonesia factors like geography, education, technic, instrument, and finance have a great impact upon the present situation of environmental law enforcement.

2.2.1 Geographical factor

Indonesia consists of five big islands and about 13,600 small islands and the population, which is pluralistic in nature, has reached over 180 million. Due to its different background in culture, tradition, value, and religion, it is not unusual if they have different insight too. Some of them need special protection of the Government with special treatment and even with special laws and regulations. And to reach the people living in remote and isolated areas, the communication system should be improved and an information network should be installed.

2.2.2 Educational factor

Actions and measures should be taken systematically to help the people become more aware of law and more familiar with ecological matters. And it is necessary for the people to realize, that the ignorance of law is not a good defence for not obeying the law.

2.2.3 Technical factor

Generally the law enforcement agents lack of experience, sound knowledge, and technical skill in handling environmental offences with effective and efficient. Therefore, intensive but comprehensive training on environmental law enforcement should be organized for groups of civilian investigators, police, public prosecutors, and local as well as provincial government officials. The next step is public prosecutors specializing in environmental problems should be appointed to be involved in every stage of environmental law enforcement. Likewise, the judges should be familiar with the environmental laws and regulations.

2.2.4 Instrumental factor

A regulation on environmental impact assessment was promulgated in 1987. It is followed by setting the standards of surface water, effluent, liquid waste, ambient air, and emission. Yet some more legal instruments should be provided to implement the 1982 Environmental Management Act. For example, there are no regulations to compensate victims of environmental damage; to assign activities for which "strict liability" principle be applied in case of environmental damage occurs; and to prosecute the corporation because of its criminal liability in committing an environmental offence.20

2.2.5 Financial factor

In addition to technical know how and managerial skill, adequate financial incentives are needed for the success of environmental protection programs. Likewise, big budget and funds must be available if the role of environmental law enforcement will be intensified.

In spite of those factors, the Government is now more firm in stressing the increasing role of enforcement. What is more, the year of 1991 was declared by the Minister of Environment, Professor Emil Salim, as the Environmental Law Enforcement Year of Indonesia.

2.3 Instruments of Enforcement

Legal norm and legal instrument are the two sides of a coin. Legal instrument is the tool to maintain, to control, and to enforce the norms.

The environmental law may be enforced by administrative instrument, civil instrument, and criminal law instrument. This order does not reflect a preference of applying each of those instruments. All of them are of the same importance. For example, it is possible to apply criminal law instrument as the first choice, especially if the norm has been intentionally violated or if the violation is committed by a repeater or if the environmental damage is serious and irreparable.

Again it is not unusual in some jurisdictions (e. g. in the Netherlands, in the United Sates, and in Canada) that environmental law is enforced through the parallel proceedings, where administrative actions or civil actions are pursued simultaneously with criminal actions.21

2.3.1 Administrative instrument

It is proportionally effective, however, to apply the administrative instrument if the offence is trivial and the environmental damage is reparable. Mostly the government officials having local, provincial or sectoral jurisdiction are vested with powers to apply this instrument. They have authority to stop environmental standard; consequently, they have authority to stop violations of the environmental standard. Whereas criminal law instruments are designated to impose sanctions on the violator, administrative instruments are focused on the violation.22

In the Netherlands the administrative sanction may be in the form of bestuurdwang,23 and in Indonesia it is called paksaan pemeliharaan hukum.24 Both are the same: action taken by the administrative authority without the intervention of the court. In the United States it is known as administrative action.25 Some of the administrative actions are known as "police powers" in administrative law. The actions are used only in exceptional circumstances and known in many countries.26

Next, there is penalty for noncompliance. In the Netherlands it is called dwangsom,27 or "administrative daily fine" and it is almost similar to administrative fine known in the United States.28 Again, there is the sanction of revoking the permit or the license. This is the most severe administrative action and known in most countries of the world.29 In Indonesia this measure is provisioned inter alia in the 1926 Nuisance Ordinance.

Last year Indonesian administrative courts just began to operate under the Act No. 5 of 1986 concerning the Administrative Justice System. It means it is possible now for any person or a private legal person to ask administrative judge to test the validity and the legality of an administrative action taken against the person.30

In the Indonesian administrative law, any administrative action taken in the form of ketetapan which is the same as beschikking in the Netherlands administrative law is a juridical decision. Therefore, any government authority taking such action should adhere to "the principle of good administration". The administrative court may annul his decision otherwise.30a

2.3.2 Criminal Law and Civil Instrument

Particularly, in Indonesia people like to resort to criminal law since civil proceedings will take years. And equipped with coercion powers, public prosecutor in Indonesia will enforced the final judgment of criminal court in an expedient means. The enforcement of final judgment in civil proceedings will take longer time. Other factor for the choice is the possibility of imposing more severe criminal sanctions on some offenders. For the committing of certain environmental offences the suspect is detainable in Indonesia.

Civil instrument will be the first choice when there is no sufficient evidence for criminal proceedings. Legally and practically, in civil proceedings the onus of proof is less strict than in criminal proceedings.

In Indonesia, public prosecutor as lawyer of the State may appear in civil proceedings when the state is the party. In the future civil instrument will be increasingly importance for the enforcement of environmental law in Indonesia. The instrument will be possibly applied to claim compensation of a serious environmental damage in particular. Also it will be applied widely to secure injunctions or in case criminal prosecution can not be instigated due to the lapse of time.30b

2.4 Factors of the Enforcement

As has been noted, all of the legal instruments are of the same importance. In practice, the choice of the appropriate instrument to be applied will depend on some factors of the enforcement.

Therefore, it will be more effective and efficient if the enforcement agents proportionally consider the following factors,31 such as, whether:

(1) the offence is a dolus (not a culpa)
(2) the offence is very serious
(3) the offence is very sensitive because of publicity
(4) the offence is not willing to cooperate in securing compliance
(5) the offender is a repeater (recidivist)
(6) the offender is a corporation (not an individual)
(7) the proof of guilt needs sophisticated evidence
(8) the environmental damage is irreparable
(9) the cost of administrative sanction is not recoverable because of e.g. bankruptcy(10) the reaction of the local community as the victim of environmental violation is strong

If the answers to those questions are positive, it is appropriate to apply the criminal law instrument at the earliest stage of enforcement.

3 ENVIRONMENTAL LAW ENFORCEMENT THROUGH CRIMINAL LAW INSTRUMENT

3.1 Ultimum Remedium

As has been noted, the order of the legal instruments, viz. :administrative, civil, and criminal law instrument does not reflect a preferential order.

At the same time, in some countries criminal law has played only a supporting role in the enforcement of environmental law. Criminal law instrument, moreover, in the past regarded traditionally as the last resort, or ultimum remedium. Within the context of the adage, criminal law proceedings will not be pursued, unless administrative action or civil action has been taken but failed to reach the desired results.32

3.2 Current Trend

That traditional view has gradually changed. This is due to the fact that the role of the criminal law relating to environmental offences is of increasing importance. For example, in the Federal Republic of Germany some efforts have been done to extent the sphere of criminal law by formulating new offences and changing the nature of delicts.33 And then in 1980 a new section under the heading of "Offences Against The Environment" was inserted into the German Penal Code. One of the reasons is to expose the socially harmful nature of environmental offences to the attention of the public.34 What is more, at the Eighth UN Congress held in Havana, Cuba (September, 1990) Germany called upon the member states inter alia "to give more effective shape to their criminal law relating to environmental offences."35 Earlier, Germany

had been successful in strengthening the criminal law to protect environment at the Federal as well as Länder level. Hence, some regulatory statutes (Ordnungswidrigkeiten) relating to the environment have provisions referring to Penal Code.36 Further, the Seventeenth Conference of European Ministers of Justice held in Istanbul, Turkey (June, 1990) gave a positive response to the proposal of Germany on the harmonization of the criminal law of each participant states relating to environmental offences.37

In the Netherlands, the adage of ultimum remedium within the context of criminal law instrument has been left. The reason is it often led to discussions between administrative officials and the public prosecutor about the question if the last resort situation had been reached.38

3.3 Other Efforts and Measures

The experience of several countries has revealed that compliance may be easily secured only when the promotion or the enforcement is backed by criminal sanctions.

Some industrial countries and a few developing countries have followed German path. They have reshaped their criminal law relating to environmental offence inter alia by introducing new section dealing with crimes against the environment in their penal code.39

In some European countries such as Portugal, Spain, Hungary, and, before 1992, the Soviet Union, serious environmental offences have been part of penal code.40 The situation is the same in the Netherlands, moreover, a great number of environmental offences have been categorized there as economic crimes. Accordingly, the criminal proceedings of such offences are ruled by special procedure stipulating in the WED (Wet Economische Delicten, or [the 1950] Economic Crimes Act).

This categorization has some advantages. For example, the investigators have greater power; the public prosecutor can apply provisional measures and has more opportunities to settle the case out of court; and the judge specialized in economic crimes can impose a variety of special sanctions and measures.41 And although there is no suspicion of any offence, inspection is permitted, and search as well as seizure are more possible. In short, police power under Dutch environmental law are somewhat more extended than under general criminal procedure.42 This practice derives from the rule under the Dutch penal code, which is in harmony with the legal maxims: lex specialis derogat legi generali and generalibus specialia derogant.

3.4 The Role of Public Prosecutor

Generally, public prosecutor has more privileges then the police in relation with the court. He is, in any event, the filter of the criminal justice system, since in committing criminal cases to trial, the court is dependent on the decision of the public prosecutor whether the prosecution will be conducted or not. Even in jurisdictions where the decision of public prosecutor in dropping the case needs confirmation of the court, most of the time the court will give a positive response to the demand of the public prosecutor.43

To be sure, in countries where the police have a very limited discretionary power, the prosecutorial discretion of the public prosecutor is of great importance, especially if he holds the powers of investigation as well as the power of directing any other law enforcement agency. Within this context, the public prosecutor of Japan or of the Netherlands is the right model of the public legal officer holding the key position in the administration of criminal justice.44

In Japan, the prosecutorial power has long been monopolized by the public prosecutor. And the suspension of prosecution system, which has gained public acceptance in Japan, has been practised widely, by which the public prosecutor is allowed to suspend the prosecution of an offender, if he deems the prosecution appear unnecessary "because of the character, age and environment of the offender, the gravity and the circumstances of the offence, or the conditions subsequent to the commission of offence."45 As a result, more than 50 per cent of the property cases (e. g. theft) committed by very old offenders are practically dropped by the public prosecutor.46

In the Netherlands, the dropping of the procedure is exercised widely by the public prosecutor and has long been recognized as the "normal" decision and is independent on the

consents of the court. As a result, less than 50 per cent of the cases delivered to the prosecution service end up in court.47

3.5 Opportunity Principle Versus Legality Principle

The prosecutorial discretion practised in Japan or in the Netherlands has its roots in what is known as the "opportunity principle", or "the principle of discretionary prosecution. "Under the opportunity principle, the public prosecutor may decide not to prosecute the case if the prosecution is inappropriate, undesirable, or if it poses greater harm to the public or the government than to nonprosecution decision. In contrast to this, under the "legality principle", or the principle of mandatory prosecution, the public prosecutor almost always has to commit any case to the court for its adjudication.48

France has applied the opportunity principle since the years of the revolution. It was then followed by several continental countries such as the Netherlands, Belgium,49 Norway,50 Sweden and later adopted in Japan, Republic of Korea, Indonesia,51 and Israel. Italy, Australia, and Germany, on the other hand, have chosen the legality principle. In Italy and Austria only the court may drop the procedure at the request of the public prosecutor after considering the circumstances of the offence or the offender.52 Whereas Germany, after having applied this principle very strictly, eventually gave room for the exceptions as can be seen in articles 152, 153153e, 154154e of the Strafprozessordnung.53

In Germany, for example, the public prosecutor, may drop the cases (including of house breaking, white collar offences and nonviolent sexual assault on children, saves those serious crimes such as murder, robbery, arson, and rape), if "he thinks that the degree of guilt is low and that public interest does not require a prosecution."54 In the event that the dropping of procedure needs confirmation of the court, the court will almost always give it.55

Within the context of environmental offences, practically the public prosecutor of Germany has wide discretion too. It is interesting enough that most of environmental offences, economic offences and not serious offences (petty offences, or contraventions) are stipulated in Ordnungswidrigkeiten; consequently, the public prosecutor of Germany may drop such cases. In other words, German prosecutors may apply discretionary prosecution, or the opportunity principle in handling nonpenal code offences.56

In the jurisdictions of common law, the decision to prosecute or not to prosecute (including the decision of choosing either summary procedure or indictment procedure) is the domain of Crown Attorney,57 which in England, for example, is called "Crown Prosecutor". To some extent he applies a variation of the opportunity principle even though the principle is not officially known.58

In the United States, the district attorney is almost always autonomous in exercising prosecutorial discretion.59 He may drop the procedure or use "pleabargaining" to dispose cases.60 In many jurisdictions, generally American prosecutor even "determines the level of punishment in nonjury and nontrial cases."61

3.6 More Measures of Diversion

European prosecutor (e.g. in Sweden, Denmark, Norway, and the Netherlands) are vested with power to levy the maximum amount of fines for settling of cases out of court; and especially in Sweden, the payment of fines is a legal alternative to a six month prison sentence.62 In the Netherlands, this procedure is called transactie, or "transaction", and may be used in settling even serious cases,63 since fine as criminal sanction is available for all penal code offences. This diversion measure is also used widely in Denmark and is increasingly used in Norway.64 Again in Norway prosecutors may dispose penal sanction without court intervention, called as patale unnlatese; the approval of the Attorney General is not necessary, unless the measure is to be used for disposing more serious offences.65

As has been noted, the opportunity principle has been practised in the Netherlands for a long period of time. The Officier van Justitie, Dutch prosecutor, may decide to prosecute or not to prosecute with or without conditions.66 The dropping of procedure by Dutch prosecutors may be

based on three ways. First, charges are dropped for reasons of policy (trivial offence, old age, damage settled). Second, charges are dropped for reasons of technicality (over 90 per cent usually due to lack of evidence). Third, the case is combined with other case of the defendant already being prosecuted.67

Those three ways of disposing cases are used widely in Japan too. We have discussed earlier the role of Japanese prosecutors in relation with the opportunity principle.68 As a matter of fact, diversion measures are known in every stage of criminal justice administration in Japan.

3.7 Police Discretion

In several jurisdictions discretion is even used at earlier stage of enforcement. For example, the police in the Netherlands may offer transaction for violators of minor traffic offences. In Sweden, the police may impose fines for minor offences.69 Ticketing procedure for minor traffic offences is practised by the police in Japan, Singapore, and Indonesia as well.

These kinds of diversion will be appropriate to be extended to minor environmental offences too. It has been a practice in Canada where the environmental inspectors may institute a ticketing procedure.70

3.8 Indonesian Experience

The opportunity principle has been the law in Indonesia for a long period of time,71 and yet in practice, it is very rarely exercised by the Attorney General. In Indonesia, only the Attorney General may drop cases for reasons of policy.72 As a result, the public prosecutor who wants to drop a case for reasons of policy has to ask the Attorney General to exercise the power. We are of the opinion that Indonesian prosecutors should be equipped with the same power, especially if the offence is trivial, the offender is very old, and the victim is cooperative. Unless the case to be dropped is serious or sensitive, the consent of the Attorney General is not necessary either.

It is interesting to note, that diversion measure known as transaction in several European countries was used widely by public prosecutors in Indonesia during the 1950s and the 1960s. That practice was used under the 1955 Economic Crimes Act. It will be appropriate if it is extended to less serious environmental offences too.

4 INCARCERATION SANCTION AS THE ULTIMUM REMEDIUM IN THE ENFORCEMENT OF ENVIRONMENTAL LAW

4.1 Alternatives to Incarceration

Since its inception the United Nations has showed its global interest in motivating all nations of the world to enhance the prevention of crime. Its impacts may be seen, for example, in many efforts done by several countries and pursued by some conferences and seminars at international and regional level focusing on the treatment of offenders, e. g. the alternatives to incarceration as criminal sanction.

As Fogel pointed out, fines (as alternatives to incarceration) are still dominant in the Continental system as well as in the Anglo-American system.73 Next, probation plays a significant role even though it shows a great variations.74 Some innovative diversions in the post Word War II should also be mentioned, inter alia in the forms of suspension of prosecution,75 declaration of guilt, suspension of sentence pronouncement and guilt pronouncement, no declaration of a sentence,76 and even the abolishing of incarceration.

4.2 Fines as Criminal Sanction

Within the context of environmental law enforcement, there are a variety of fines, viz. : conventional fines, daily fines, day fines, and conditional fines.77

Conventional fine is the one known for a long period of time. They are fixed mainly in penal codes of many countries.

Daily fine may be imposed by criminal court "as a lump sum or for every day the offender delays in performing its obligations (i. e. operating in violation of relevant permits)."78 The longer the violator delays compliance with the court order, the bigger the financial sanction pay. It has been stipulated in France, Belgium, and with variation in England.79

Day fine is the one determined by using a multiplier factor based on the monthly income of the offender and on the gravity of the offence.80 It has been the rules in Germany, Austria, Sweden, Denmark, and Finland.81

Conditional fines is the one which may be combined with particular conditions, viz. :the reparation of environmental damage and the payment of victim compensation.82 It has been known in Germany, Sweden, and with certain modifications in the Netherlands, Belgium, and France. The fine will not be enforced unless the violator commit another offence during the probation period.83

In theory, conditional fine can be applied also in Indonesia pursuant to general rules stipulated under the Book I of the Indonesian Penal Code. In practice, it is almost never used.

4.3 Probation System

Probation in the Continental System followed the Belgian model. In Belgium, a conditional sentence called in French sursis has been stipulated since 1888.84 It is then adapted in France, Italy, Germany, Austria, Sweden, Norway,85 and the Netherlands; later it is adapted in Japan, Republic of Korea, and Indonesia.

Again in Belgium, there is a probation system before trial and it is imposed by public prosecutor. This prosecutorial probation is adapted in Germany, to be instituted by German prosecutors by refraining from prosecution relating certain offences.86 These kinds of pretrial probation are widely used in the United States, and it is called "diversion".87

In the Continental system of probation the determination of guilt is essential and the imprisonment sentence is not executed under certain conditions. The convicted is put in the community during the probation period with or without supervision.88 On the other hand, in the Anglo-American system of probation, especially in most American jurisdictions, probation is not a penal sanction, and the guilt determination is not essential. If the offender is found guilty, the pronouncement of sentence will be suspended. Since the penal sanction is not yet pronounced, the offender is at liberty supervised by a probation officer with or without conditions.89 And in both systems probation is of course revokable.

In the meantime, some efforts have been taken to abolish incarceration as criminal sanction. In Finland, for example, the use of imprisonment was reduced through decriminalization of offences, reformulation of criminal rules for other offences, and further development of the alternatives to penal sanction.90

4.4 Incarceration as Ultimum Remedium

After all the alternatives to be applied to a particular case have been explored, but the enforcement agent fails to find the most appropriate one, the case should be committed to court for adjudication. If the guilt then is found it is for the judge to consider the most appropriate sanction for the offender.

There are a variety of criminal sanctions to be chosen, e. g. conventional fine, daily fine, day fine, and conditional fine. The next choice is suspension of guilt pronouncement or sentence pronouncement with conditions. If the sentence is pronounced,either fine sanction or incarceration sanction or both may be suspended with conditions. With regard to environmental offences the possible conditions are inter alia, the restoration of environmental damage, the payment of victim compensation, or the posting of deposits.

In any event, imprisonment or incarceration as criminal sanction, especially in relation with environmental offences, should be the last resort, or the ultimum remedium.91

Within the context of Indonesian penal system, alternatives to incarceration as criminal sanction for the environmental offences may be elaborated through conventional fines and conditional fines, and mainly through conditional imprisonment with or without supervision. Under a probation scheme a special condition may be imposed with a suspended sentence. The special condition is the restoration of environmental damage.

5 CLOSING REMARKS

5.1 More Severe Penal Sanctions

The trend of industrial countries has indicated the moving towards more severe incarceration as penal sanction for offences relating to environment.92

Still, innovative alternatives to incarceration are more and more available in the Continental system and in the Anglo-American system as well. David Fogel's study or Skoler and Sullivan's report for example, mentioned about court warning, punitive warning, no declaration of a sentence, community service order, abolishing of incarceration, posting of deposits, conventional fines, daily fines, day fines, conditional fines, application of funds from fines to restore environmental pollution, prohibition on the practice of profession, disqualification of the offender, or declared as being ineligible for government grant, loan, and contracts, closing of firm, publication of conviction that may damage the reputation of the relevant enterprise.93

5.2 Prosecutorial Discretion

We have seen in both opportunity and legality principle that it is not impossible for public prosecutor to exercise his discretion in disposing cases. In many criminal justice systems the public prosecutor is indeed a semi judge. Accordingly, he may drop the charge or the procedure with or without conditions; he may offer transaction, the waiver of prosecution,94 and pretrial probation, or prosecutorial probation; even he may imposed penal order with or without the consent of criminal court.

Those diversion measures will be of great significance in terms of effectiveness and efficiency when they are applied to environmental offences.

5.3 Some Notes On Indonesia

Unfortunately, the role of Indonesian prosecutors in using the opportunity principle is not very dominant. In the future, the power to drop cases for reasons of policy should be vested to all prosecutors. Some are at the same time even trying to end the prosecutorial discretion and suggesting that Indonesia adhere the legality principle. Most of them do not know, however, that even in the legality principle there is room for prosecutorial discretion as we have seen in Germany. Moreover, many of them are confused about the legality principle under procedural criminal law and the legality principle under substantive criminal law.95

There are some more legal hampers yet to be overcome in Indonesia. For example, under commune crime rules the corporate criminal liability is still de lege feranda, or ius contituendum. As a result, according to Indonesian criminal law a legal person is not punishable unless it commits economic offence.96 Therefore, some are advocating the efforts to corporate environmental offences into the 1955 Economic Crimes Act, like it has been the law in the Netherlands. Within the next five to ten years, when the draft of new penal code is enacted, corporations will be also punishable in Indonesia. In fact it is possible to insert new article into the present penal code stipulating the liability of legal person.97

In addition, there are some environmental provisions which are too abstract in terms of definition and sanction as well. The role of judges is of decisive importance to avoid multi interpretable situations. Therefore, workshops and discussions on innovative sanctions for the Indonesian judges should be organized too. The Indonesian legal drafters, on the other hand, should be more aware of not prescribing ambiguous or abstract provisions and definitions.98

Finally, lack of good laboratories is another problem in Indonesia and it has resulted in several dismissal and acquittal judgments for very serious or sensitive environmental cases. Thus, scientific evidence plays a very important role to answer whether or not pollution has occurred.

5.4 Conclusion

The adage of ultimum remedium is not relevant to the criminal law instrument as a response to a particular environmental law violation, but to the imposing incarceration as a sanction to the particular environmental law violation.98a

The enforcement of environmental law needs expertise and special technical skills. It is only natural if the office of public prosecutor has special department relating to environmental offences staffed by special trained public prosecutors, like those offices in the Republic of Korea, the Netherlands, Canada, and in the near future may be in Indonesia.

Again, a good enforcement of environmental law needs good legislation, good knowledge of law, good administration, and enough capacity of infrastructure. Notes/References

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48 Satsumae, p. 101 and Horskotte, p. 29. It is noteworthy that the legality principle is also known in substantive criminal law. Within this context, the legality principle means that no one will be pronounced guilty of any criminal offence for his actions which did not constitute a criminal offence at the moment of his actions. This rule is in harmony with the maxim of nullum delictum, nulla poena, sine praevia lege poenali. In other words, it is in contradiction with ex post facto laws. Whereas within the context of criminal procedure, the legality principle (mandatory prosecution principle) is opposed to the opportunity principle (discretionary prosecution principle); see also infra n. 95.
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58 cf. John Wood, "Prosecution Policy in England and Wales," The Asian Journal of Crime Prevention and Criminal Justice No. 8, 1990, p. 41, p. 43, and pp. 4647.
59 James L. LeGrande, The Basic Processes of Criminal Justice (New York and Beverly Hills: Glencoe Press, 1973), p. 74.
60 Ibid. , p. 73; see also Paul B. Weston and Kenneth M. Wells, The Administration of Justice, 2nd ed. (Englewood Cliffs: Prentice Hall, Inc. , 1973), pp. 7980.
61 Fogel, p. 237.
62 Ibid.
63 Ibid. , p. 116 and p. 238.
64 Ibid. , 237; for Norway, see Röstad, p. 147.
65 Fogel, p. 237.
66 The Court System in the Netherlands (N. P. : Ministry of Justice, 1990), p. 4.
67 Ibid. , pp. 45; also cf. Fangman, p. 129.
68 Supra nn. 4546.

69 Fogel, p. 40.
70 Compliance, p. 19.
71 Prior to 1961 Indonesian prosecutors like their counterparts in Japan and in the Netherlands were vested with power to drop cases for reasons of policy i. e. if the prosecution would harm either the government, the state or the public; cf. Surachman, p. 7 and p. 25.
72 The 1961 Prosecution Service Act, art. 8 and the elucidation of art. 77 of the 1981 Code of Criminal Procedure. The power was endorsed recently under art. 32 (1) c of the 1991 Prosecution Service Act. Still, the elucidation of that article implies that the power will not be used widely.
73 Fogel, p. 12.
74 Ibid. , p. 13.
75 In Japan, it is practised since the preWorld War I. 76 Fogel, p. 13.
77 Skoler and Sullivan, p. 30 and p. 32.
78 Ibid. p. 30.
79 Ibid.
80 Ibid. ; see also Fogel, p. 203.
81 Fogel, p. 203.
82 Skoler and Sullivan, p. 30.
83 Ibid.
84 Fogel, p. 13.
85 See Röstad, pp. 142143 in relation to Norway.
86 Fogel, p. 238, p. 196 and p. 199; see also supra nn. 5356.
87 Fogel, p. 238.
88 Ibid. , p. 13.
89 Ibid. , p. 12 and p. 119.
90 Professor Matti Joutsen, of the Research Institute of Helsinki, credited the neo classicists with such efforts; see Fogel, p. 33.
91 For example, the Italian court imposed prison sentence upon the five Icmesa executives. On appeal, however, four of the sentences were overturned and the fifth sentence was suspended; see Ved P. Nanda and Bruce Bailey, "Challenges for International Environmental Law," work paper submitted to the Seoul Conference on the Law of the World (1987), p. 6.
92 Whereas efforts have been done to abolish incarceration in relation with most offences, severe penal sanctions have been introduced in many countries (e. g. Swiss since 1976). Other efforts covered the introducing of corporate criminal liability (the Netherlands, for economic offences, since 1950 and for commune offences, since 1976); and "criminalization" of culpa offences exposing human life and health to danger (Hungary, since 1976). Again, severe penalties stipulated in Federal environmental Protection Act of Germany (since 1974) introducing fines of up to 100,000 DM and prison sentences of up to ten years; and in the 1990 Conservation of BioNatural Resources Act of Indonesia introducing fines of up to 200 million rupiahs and prison sentences of up to ten years; cf. Skoler and Sullivan, p. 31 and p. 32 and Loebby Loqman, "Pertanggungan Jwab Pidana Bagi Korporasi Dalam Tindak Pidana Lingkungan Hidup," in Prosiding (Jakarta: Skrep & Walhi, n. d),
93 See Skoler and Sullivan, passim; and Fogel, p. 13.
94 For the "waiver of prosecution" in Scandinavia, see Fogel, p. 30, pp. 4445, and p. 238; the practice in Norway, see stad, pp. 144145.
95 See supra n. 48.
96 See Andi Hamzah, Hukum Pidana Ekonomi, rev. ed. (Jakarta: Penerbit Erlangga, 1986), pp. 2628; and Andi Hamzah, "Tanggung Jawab Korporasi dalam Tindak Pidana Lingkungan Hidup," in Prosiding (Jakarta: Skrep & Walhi, n. d.), pp. 8283.
97 It can be inserted into Chapter III (Book I) of the present Code.
98 These phenomena also exist in relation with economic crimes acts and regulations in general "leaving much discretion to those trying to enforce the law"; see Matti Joutsen,

"'Civilizing the Control of Economic Crime: Alternatives to the Criminal Justice System in the Prevention and Control of Economic Crime," UNAFEI Report No. 31, April 1987, p. 160.

98a cf. Joutsen, p. 171 and passim in relation with economic crimes.

99 As discussed by Professor Th. G. Drupsteen in his lecture at the Attorney General's Office in Jakarta, Indonesia, on 27 October 1990.

ENFORCEMENT OF CANADIAN LAWS OF ENVIRONMENTAL PROTECTION AS APPLIED TO FEDERAL FACILITIES

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1 INTRODUCTION

In Canada, The Federal Government is the largest single player in the Nation's Econony. It employs more workers than any other organization. It maintains facilities to administer Federal Prorgramms and house the employees who run them, to carry out research and other laboratory work, and to store the goods that it needs to carry out Federal activities of many different types. Each year, Canada's Federal Government purchases some 10 billion Dollars in both goods and services. Also, inevitably, Federal Facilities Release Emissions and effluents into the environment and must deal with the waste that the facilities and their activities generate.

Canada's national government takes the position that the environment is everybody's business. Solving Environmental problems will take considerable time and effort. The federal government recognizes that it must do its part to achieve a healthy environment and a prosperous economy for all Canadians, now and in the future. One part of the federal government's role in meeting that commitment is compliance by federal facilities with federal Environmental laws.

2 CANADIAN ENVIRONMENTAL PROTECTION ACT

Environment Canada is responsible for enforcing the **Canadian Environmental protection act** that became law in july 1988. The full title of the legislation is "an act respecting the protection of the environment and of human life and human life and health". The title clearly defines the purpose of the statute. Also, the declaration or preamble of the **Canadian Environmental protection act** states that "protection of the environment is essential to the well-being of Canada". That phrase underscores the importance placed by the government of Canada on the concept of Environmental protection.

In a summary of a few words, the act provides a comprehensive approach to Environmental protection, covering activities that could result in pollution affecting land, inland waters, the ocean and the atmosphere. It gives the government of Canada powers to set national regulations for any substance that threatens to harm the environment or the health of Canadians. Those regulations may encompass the entire life cycle of substances -- from their development and manufacture through transportation, distribution, storage, use, and ultimate disposal as waste.

It is significant that section 4 of the **Canadian Environmental protection act** states that the act is binding on her majesty in right of Canada -- in other words, the federal government of canada must comply with the law. In addition to the full act applying to government as well as to the private sector, cepa has a special part, which is targeted specifically to federal departments, boards, agencies, and federal crown corporations, which are corporations of the state, as well as federal lands, works and undertakings. That part allows the creation of regulations specific to federal departments and the federal entities listed above, to control emissions, effluents and waste handling practices.

3 FISHERIES ACT

In addition to the **Canadian Environmental protection act**, environment Canada enforces the pollution prevention provisions of the **fisheries act**. That act is probably Canada's first Environmental statute, and has been in force since 1868. The purpose of the statute is to protect

fish, fish habitat and human use of fish. One of the strongest provisions to achieve that statutory objective is the prohibition against the deposit, into waters where fish are found, of any substance that is harmful to fish. Like cepa, the **fisheries act** states, in section 2, that the federal government is subject to the act and all its regulations.

So, the concept of federal law applying to Canada's federal government is not new in Canadian law. But what is new is that in 1988 the minister of environment announced the intention of his department to treat the public sector, that is government, the same way as the private sector in terms of enforcement of Environmental law. The minister believed that the federal government must be exemplary in its Environmental behaviour and specifically committed the government of Canada to that goal.

Consequently, in july 1988, environment Canada published its enforcement and compliance policy for the **Canadian Environmental protection act** which provided equal treatment in enforcement to both government and non-government regulatees. The soon to be published compliance policy for the habitat protection and pollution prevention provisions of the **fisheries act** takes the same approach.

4 COMPLIANCE AND ENFORCEMENT

The basic principles of the enforcement and compliance policy for the **Canadian Environmental protection act** are:

- compliance with the act and its regulations is mandatory;
- enforcement officials will be fair and consistent in their application of the law, and use rules and processes securely founded in law;
- enforcement officials will apply the act with an emphasis on prevention of damage to the environment; and
- enforcement officials will encourage the reporting to them of suspected violations.

These principles are repeated in the soon to be published **fisheries act** habitat protection and pollution prevention provisions compliance policy.

A fundamental difference between the two policies, however, is that the cepa policy commits enforcement officers to examine **every** suspected violation and to take action consistent with the policy; and the **fisheries act** requires enforcement officers to respond to suspected violations, **giving priority to those that result in or pose the greatest harm** to fish, fish habitat or to human use of fish.

The cepa policy requires examination of **every** suspected violation, while the **fisheries act** policy requires **priorization** of suspected offences for investigation.

You might think it strange for an enforcement and compliance policy to state, as basic principles, that compliance with the law is mandatory and that enforcement officers "will only use rules, sanctions and processes securely founded in law". They may seem to you to be "givens" or self-evident truths.

But, in the past, environment Canada's approach to law enforcement had shown to regulatees that the department was flexible on compliance. Regulatees had experience with officials who were prepared to use rules and processes that were not provided for in federal Environmental laws and that were not even enforceable civil contracts. These were measures such as letters

Acknowledging and tolerating non-compliant behaviour for specified lengths of time, or giving commitments not to enforce the law if Environmental studies were done.

The negotiation of compliance and the use of tools not provided for in legislation did not work -- hence, the need to stipulate as basic, general principles that "compliance with the act and its regulations is mandatory" and that only rules, sanctions and processes founded in law would be used. The government of Canada wanted to signal that its previous reliance on negotiation had ended and that it was returning to the philosophy that the law applied to everyone equally.

So, within environment Canada, which officials enforce the **Canadian Environmental protection act** and the pollution prevention provisions of the **fisheries act**? In both cases, enforcement officials are individuals designated as inspectors.

It is inspectors that have the most frequent and regular contact with government departments and other federal bodies affected by the legislation. Inspectors have three principal roles. They can:

- carry out inspections to verify compliance with the law;
- direct that preventive or corrective measures be taken in an emergency when there is danger to the environment, human life or health, caused when the unauthorized release of a regulated substance has occurred or is about to occur; and
- conduct investigations to obtain evidence of violations.

They can also review options for preventive and corrective action generally, explain legal requirements, including warning of potential violations, in order to assist government agencies as well as individuals and companies in meeting their obligations under the **Canadian Environmental protection act** and the **fisheries act**. That activity by inspectors must be undertaken with great care in order to ensure that inspectors who are, after all, enforcement officials do not inadvertently assume the role of a technical consultant.

Inspectors normally have training in engineering or sciences like biology, chemistry, geology or Environmental sciences. It is this background that enables inspectors to understand fully and enforce regulations such as those that deal with liquid effluents, atmospheric emissions, limits for releases to the environment of toxic substances, and storage of toxic substances such as polychlorinated biphenyls or pcbs.

Some inspectors may specialize strictly in the investigation of offences. Those investigation specialists have expertise in areas such as:

- investigative techniques;
- gathering of evidence and procedures to ensure continuity in the control and custody of evidence;
- taking statements and soliciting information from witnesses;
- securing and execution of search warrants;
- court procedures;
- preparation of special reports for crown prosecutors who bring charges laid under the **Canadian Environmental protection act** and the pollution prevention provisions of the **fisheries act** to trial; and
- appearing as witnesses in court proceedings.

Investigation specialists may be scientific personnel having the same background as other inspectors, may be former Environmental investigators for a provincial or territorial government, or former police officers.

But what do these statutes and the inspector and investigation functions described above mean in the day-to-day world of the operations of Canadian government departments? It means that the government of Canada is serious about "going green". It means that, under the **Canadian Environmental protection act** and the pollution prevention provisions of the **fisheries act**, inspectors will verify compliance at federal facilities. And they will be every bit as serious about the need for those facilities to comply with the law as if they were inspecting a private company.

Under cepa and the **fisheries act**, federal government employees are personally responsible for unlawful acts done by them in the course of carrying out their duties. This principle applies to everybody -- ministers included:

Federal employees can be personally liable if:

- they knowingly violate a regulation under cepa or the **fisheries act**;
- they are unaware that a regulation exists and they violate it (this is because federal employees are responsible for knowing the regulations under the **Canadian Environmental protection act** and the **fisheries act** that apply to their work);

- they know that a regulation is being, or will be violated, and they do not report to their supervisor;
- they falsify information or neglect to provide full information about a violation or suspected violation when requested to do so by the minister of the environment or a cepa or **fisheries act** inspector; and
- a cepa or **fisheries act** inspector has directed the employee to take preventive or remedial action when there is a release or potential release to the environment of a regulated substance that will violate the law, and the federal employee does not obey the direction.

In keeping with the 1988 commitment by the government of Canada to be exemplary in its Environmental behaviour, federal departments and their employees have a moral obligation to show leadership by practicing sound Environmental management.

Sound Environmental management involves three basic things:

- preventing violations before they occur;
- reporting violations; and
- reducing the harm and correcting any damage caused by violations.

One of the best ways to prevent violations before they occur is to know the law and accompanying regulations. Environment Canada believes that promotion of compliance through information and education is essential. Promotion is an effective tool in securing conformity with the law. Accordingly, environment Canada undertakes public education and information transfer, through distribution of publications, activities such as seminars for both government and private industry, technology development and technology transfer programs, and consultation during the development of new regulations and the amendment of existing ones.

Under its public education and information program, environment Canada distributes upon request:

- copies of the **Canadian Environmental protection act** and of the **fisheries act** and their accompanying regulations;
- Environmental quality guidelines and objectives, guidelines governing the release of substances to the environment, and Environmental codes of practice;
- the enforcement and compliance policy for cepa and, when it is published within the next few months, the compliance policy for the habitat protection and pollution prevention provisions of the **fisheries act**;
- a list and short description of court decisions related to the statutes and their regulations; and
- fact sheets, handbooks and reports on relevant subjects.

Environment Canada does not want to see any surprised looks on the face of officials who work elsewhere among the federal family of departments, boards and agencies. While environment Canada's role is to protect the environment in accordance with federal laws, it is in the department's interest to help meet the Canadian government's overall commitment to Environmental protection and to exemplary behaviour by federal institutions. After all, we don't want to see violations anywhere, and knowledge of the law and regulations is the first step to ensure that regulatees comply. Also, since 1988, environment Canada has held over 26 major educational and information sessions with other federal government departments, boards, commissions, agencies and federal crown corporations. This figure does not include the numerous smaller, informal sessions that have been held or the technical sessions for discussion of items like specific pollution control technologies, testing protocols, sampling techniques and Environmental effects monitoring.

Environment Canada believes that, during regulation development or amendment, consultation with both regulatees and the beneficiaries of regulation results in better and more effective Environmental protection instruments. The department also recognizes that compliance with regulations is more likely when regulatees have been involved in regulation development. For those reasons, environment Canada regularly consults with affected parties:

- at the stage of determining whether an Environmental problem exists that requires resolution;
- at the stage of choosing the appropriate tool for control, including codes of practice, guidelines for release to the environment of toxic substances, as well as regulations; and
- during the development of the regulation itself.

Canadian federal regulations must be published in a national register called the **Canada** gazette. Regulations are first published in part of the **gazette** and there is a comment period during which anyone -- companies, Environmental groups, Environmental law specialists from the private sector, and ordinary citizens -- may send comments to the government of Canada. The government's regulatory policy calls for a comment period of at least 30 days. Therefore, for regulations under the pollution prevention provisions of the **fisheries act**, the minimum comment period is 30 days. However, the **Canadian** Environmental protection act provides for a longer period, namely a minimum of 60 days.

The consultation with affected parties and the public reduces the annoyance and anger of regulatees who will likely be antagonistic if they believe that government is "springing" something on them with no opportunity for them to have their say. That doesn't mean that grudging compliance is avoided, because most of us don't like rules -- but at least again, no surprises.

When a cepa inspector carries out an inspection for the first time at a facility, whether government or private sector, he or she brings a copy of the **Canadian Environmental protection act**, the relevant regulation and the cepa enforcement and compliance policy. This ensures that the person in charge of the facility has in his or her possession copies of the legal requirements and the policy under which cepa inspectors operate. The same conduct applies for inspections under the pollution prevention provisions of the **fisheries act**.

5 RESPONSES TO VIOLATIONS

Now, I wish to talk about the responses to violations used by inspectors and investigators under the **Canadian Environmental protection** and **fisheries acts**. If an inspector or investigator is able to substantiate that a violation of cepa or the **fisheries act** took place, they will take action consistent with specific criteria and choose the appropriate enforcement measure from the different types that I will review shortly.

First, the criteria -- when inspectors discover a violation, they will apply the following factors when deciding what enforcement action to take:

- **nature of the violation** -- this includes consideration of the seriousness of the harm or potential harm, the intent of the alleged violator, whether this is a repeated occurrence and whether there are attempts to conceal information or otherwise subvert the objectives and requirements of the act.
- **Effectiveness in achieving the desired result with the violator** -- the desired result is compliance with the act, within the shortest possible time and with no further occurrence of violation.
- Factors to be considered include the violator's history of compliance with the act and regulations, willingness to co-operate with enforcement officers, evidence of corrective measures already taken, and whether other federal, provincial or territorial authorities are taking enforcement action for the same offence under another statute.
- **Consistency in enforcement** -- enforcement officers intend to be consistent in their handling of violations. Therefore, they will consider how similar situations were handled when deciding what enforcement action to take.

The **Canadian Environmental protection act** and the pollution prevention provisions of the **fisheries act**, administered by environment Canada have a limited range of enforcement measures that inspectors can use. Those measures are:

- warnings, used under both statutes;
- directions by inspectors, provided under both statutes;

- ministerial directions under the **fisheries act** allowing the minister to request regulated facilities to carry out monitoring or to provide the minister with certain data, measurements, or other information;
- ministerial orders under the **fisheries act** to restrict, change or close down a polluting operation, but only with approval of the federal cabinet;
- remedial orders, only available under the **Canadian Environmental protection act**, that enable the minister to Recall, from the marketplace, toxic substances or products containing toxic substances that violate the law;
- prohibition orders, also only available under the **Canadian Environmental protection act**, that enable the minister to prohibit manufacturing, importing, distribution, use, processing, sale and so on for substances that are new to the Canadian marketplace and that have been manufactured or imported in violation of the law;
- injunctions to stop illegal activity or to prevent it from taking place, available under both the **fisheries act** and the **Canadian Environmental protection act**;
- prosecution, of course; and
- civil suits to recover costs such as funds spent to clean up toxic or harmful substances released illegally into the environment or into water where fish are found, funds spent by inspectors to prevent illegal releases, or spent to publish information that individuals, companies or government agencies had failed to publish when ordered to do so by the courts.

While both statutes provide authority to issue tickets, similar to tickets for speeding or parking fines, cepa and **fisheries act** inspectors do not have that tool available to them yet. However, under the federal **contraventions act**, which will likely be in effect by january 1, 1994, environment Canada enforcement officials will be able to issue tickets for certain violations. Because tickets are designed to be issued for offences where evidence is immediately observable, environment Canada has limited ticketable offences to those that involve failure to file reports by the prescribed date, failure to include all required information in reports, failure to have identifying labels on containers of chlorobiphenyls or pcbs, and other similar offences.

All these enforcement tools can be used against individuals, private companies and government bodies that violate federal Environmental laws. But there are difficulties that we encounter when environment Canada inspectors inspect and investigate, and from time to time, bring charges against other federal departments and agencies. In Canada, it is still a relatively new thing for one federal body to prosecute another for violating federal Environmental laws. Many federal departments still do not fully realize that they are subject to the law. And they tend to feel almost hurt by the notion that another department would hold them to account for their actions. They sometimes express the view that all federal departments are part of the same family and should protect each other from punitive action. The cases described below give an idea of these problems.

An inspector under the **Canadian Environmental protection act** observed a dredge operated by a federal department which appeared to be carrying out work in violation of a permit granted under the ocean dumping provisions of cepa. The dredge was operating in june when its permit obliged it to operate three months later in the month of september.

The inspector investigated and confirmed that the dredging violated the permit. He detailed the nature of the violation and began to prepare evidence in order to apply for a search warrant. The search warrant was executed at two locations belonging to the department -- at the dredge and a regional office of the federal department. All the evidence gathered led to charges being laid against the federal department.

This was the first time that a federal department was charged under the **Canadian Environmental protection act**. And because it was a matter of one government body charging another, that is the queen vs. The queen, environment Canada used a prosecutor who was not an employee of the federal department of justice but was in private practice, to avoid problems of conflict of interest for the department of justice who acts as solicitor to all federal departments.

Environment Canada's objective in this case was a significant penalty and a finding of guilty to deter other departments and managers from neglecting their obligation to comply with the law.

The court decision rendered on june 4, 1992 was more punitive than either environment Canada or the defendant expected! The sentence was a fine of $1.00 Without costs. But the court also imposed an order directing Environmental restoration work at a landfill site to a value of not less than $100,000, to be carried out on or before june 4, 1993. The presiding judge also stated two important things:

(1) while the actions of the defendant were not malicious or premeditated, they could not be forgiven; and
(2) that government employees must be held to the strictest standards because the public entrusts them with protecting the environment.

Another case may also be of interest to you. In 1988, there was a disastrous fire at a warehouse where a toxic substance, namely chlorobiphenyls or pcbs, was stored in enormous quantities. About 3,000 people were evacuated from their homes for nearly three weeks while the fire was brought under control and cleanup of toxic residues took place. The environment minister then proclaimed, under the **Canadian Environmental protection act**, an emergency order setting out stringent requirements for storage of pcbs to avoid another such incident.

After the order was in effect, a cepa inspector carrying out a routine inspection at a federal facility discovered pcbs stored in contravention of the order. He issued an inspector's direction under section 36 of the **Canadian Environmental protection act**. But the federal facility refused to comply, saying that it had no budget to store the toxic substance in accordance with the order. Further inspections continue to reveal a failure to comply. The manager for the facility even offered inducements to the cepa inspectors to close their eyes and forget about the violations.

This all led to environment Canada seeking a search warrant to gather evidence against the federal facility. Environment Canada inspectors executed the search warrant and found evidence of continuing violation as well as evidence of the quick attempt to store some of the pcbs as required under the emergency order.

Charges were brought by environment Canada against the federal facility and its manager for violation of the order made under the **Canadian Environmental protection act**. Faced with the amount of evidence submitted against the facility and the manager, both agreed to plead guilty. The court levied a $25,000 fine against the federal facility and, in return for a guilty plea, gave a conditional discharge to the manager which directed him to pay $5,000 to an Environmental fund and to undergo six months' probation.

A third case involves deposit of a deleterious or harmful substance to water where fish are found. Under the pollution prevention provisions of the **fisheries act**, it is prohibited to deposit substances that are harmful to fish to any water where fish are found, or to any place from which the substance can enter water where fish are found, unless the deposit is authorized by regulations under the **fisheries act** or another federal law.

At one of its regional offices, a federal department violated the prohibition contained in the pollution prevention provisions of the **fisheries act**. Apparently, over a 12 month period, gasoline and diesel oil leaked from tanks into storm sewers and then into fishery waters. Gasoline and diesel oil are substances that is known to be harmful to fish, and there are no federal regulations authorizing the deposit of gasoline and diesel oil to water where fish are found.

The department had developed policies and procedures to deal with Environmental hazards. Environment Canada's evidence showed that those policies and procedures were not followed in this case.

In view of the nature of the offence and the seeming lack of due care, environment Canada brought charges against the department for the illegal discharge. There have already been two weeks of trial on this matter, and, in september 1992, the trial judge will hear the department's argument that one federal department cannot charge another with a violation of federal law.

As I mentioned earlier, section 2 of the **fisheries act** states specifically that the federal government is subject to the statute and all its regulations. With that clause and after the june

1992 judgment that found a federal department guilty of charges brought by environment Canada for a violation of federal Environmental law, you might think that the validity of the queen bringing charges against herself would be established. But the defence lawyers intend to pursue the argument anyway. We will see what the courts decide in september. But, while we are not complacent, we are not worried. Environment Canada is confident that the principle of federal law applying to federal departments is well founded.

6 CONCLUSIONS

Environment Canada hopes that these cases and others currently under investigation will help drive home the notion that the federal government must comply with its own laws. But we, in Canada, are still feeling our way through the legal and policy matters surrounding one entity of the queen charging another with violating federal Environmental law. That has not, however, weakened our determination to set the federal house in order and ensure that federal departments and agencies comply with Environmental law.

THE 'ECOLOGICAL SEMAPHORES' FOR FOURTEEN PATHS OF OWNERSHIP CHANGES IN POLAND

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INTRODUCTION

The paper deals with the experience of the last year in coordinating the environmental law enforcement with the process of privatization of the formerly state-owned enterprises. In view of tremendous growth in the number of sale deals and liquidation proceedings, environmental protection agencies are currently preparing new methods which will establish revised operating policy. These methods will consist of various so called 'ecological semaphores' - the law or administrative check - points for supervision or steering this process. The above solutions were worked out by a comparatively narrow staff of lawyers, economists, people involved in environmental protection and those having industrial experience. These solutions are the inconspicuous attempt to settle ecological problems, set or left during stormy, involving millions of people process of ownership transformations in Poland. It is necessary to add that the solutions presented in this article are being fought against by a considerable group of people involved in this process. Even some foreign specialists are against them because they create difficulties and modification of invented by them "the only just" solutions. As an example, during one sectoral privatisation programm only 3% of funds has been used for evaluation the present environmental condition of the enterprises.

1 THE REVIEW OF THE EXISTING SITUATION

To accomplish its aim of improving the condition of the environment, the Polish State Inspectorate for Environmental Protection (PIOS) participates in the process of the ownership changes. Whenever the most environmentally detrimental state-owned factories are prepared to the above - mentioned process, PIOS utilizes a wide array of tools to enforce the desirable direction of technological changes. Prompt and effective action on the part of PIOS depends deeply on the quick selection of the appropriate legal decisions issued during this process.

In order to put this discussion in the proper context, there must be an understanding of the present situation within which we are working. The privatisation process goes independently from an enforcement action. This process has its own laws and regulations which does not contain the relevant ecological clauses. On the other hand Polish ecological law was created in the different industrial, economical and political situation. This law has not yet adjusted itself to the quick ownership changes. On both sides we can find the insufficient knowledge of many legal acts and the practice of their implementation. The typical examples are following:

- undersigning the privatization contracts which infringe the ecological acts or
- fixing the ecological taxes and rules which slow down the privatization process of some Polish industrial sectors.

  Any established practice is hard to change. In recent months at least the four centres inside the administration in Poland have increasingly taken the biggest responsibility for the implementation of the privatisation process:
- Ministry of Finance, which supervises the state-owned banks and makes big deals, in which part of debts guaranteed by the government is being taking over.
- Ministry of Industry and Trade, which supervises the majority part of Polish state-owned industry, especially the heavy industry, and participates in the joint-venture deals.
- Ministry of Ownership Changes, which represents the State Treasury and sells the stocks of the previously state-owned plants or the assets remained from liquidated enterprises.

- The vojevods (district governors), who are responsible for issuing permits (decisions) and represent the State Treasury in the process of privatisation of small and medium sized enterprises.

The ownership changes occur by fourteen different ways. The given amount of various methods is approximative, in fact there are many modifications, non-typical means of transformations, which sometimes are on the edge of the law. The process of transformations is not static, some paths are temporarily more predominant and there are "rush hours" because the considerable amount of enterprises pass them at the same time. Some time later new paths take the leadership.

At the beginning of this process at least three kinds of state-owned enterprises can be found. These are so-called normal enterprises, acting on the basis of general rules (i.e. common enterprises, making about 70% of a whole), state-owned enterprises joined (many years ago) into the big groups ("copper", "sulphuric", "air", "pharmaceutical" etc.) and enterprises acting on special rules (railway, airports, harbours, banks, defensive industry etc.).

The final result of this process are numerous compositions (joint-stock companies, limited liability companies, cooperatives, societies, foundations involved in economic activity, agencies or firms with foreign capital etc.). They possess the mixed ownership structure, they often produce something different from their predecessors. In addition, they are not always full legal successors of firms, from which they originated. Sometimes on the basis of property of one previously state-owned firm several (in extreme cases several hundred) firms came into existence. They profit together from the remnants of the former plant. Some investors try to cut out the most profitable part of the factory (usually the newest unit) and to let loose the remnants (eg. old power plant, land with accumulated wastes, old unit with the majority of workers etc).

Rapidity and spontaneousness of this process cause that the environmental protection agencies have problems with proper identification of economic entity which is a party of legal proceedings. The examples of such cases are the following:

- joint use of one chimney by many new economic entities, emitting substances from similar production processes,
- delivering of dangerous wastes to the area rented from other company, financially dependant on parent company, the producer of those wastes,
- complicated forms of renting (leasing) of technological installations, sometimes even the parts of one production line.
- taking over the management of the state-owned enterprise by other companies or persons (liquidator, syndic, commissioner-manager etc.).

Past experience indicates that at present we deal with continuum of various forms of ownership from full state ownership to private ownership. The only common characteristics of those subjects is that in their activity they aim to maximize their profit. When a state-owned enterprise is concerned its aim is to maximize earnings of the staff. In those enterprises the board of management is under the strong influence of the Council of Workers.

Not all of the legal instruments of enforcement produce effect in case of such instable process like the process of ownership transformations. The rudder sufficient for steering a long Viking boat would be useless for steering a catamaran.

In order to show how different are the processes of ownership transformations a dozen or so typical examples are given below:

- commercialization of the state-owned enterprise into so-called "one man company of State Treasury" and then offering its stocks to the new owners,
- liquidation of the enterprise and lending (renting, leasing) of its property to a new company, at which at least 50% of owners are the previous workers of the enterprise,
- liquidation with selling the assets to many new owners,
- giving the management of a state-owned enterprise to a group of managers appointed by another company, sometimes with the participation of the former board of directors,
- giving the management of a state-(100%)owned joint stock company to other company for indemnity in a form of a part of stocks,

- giving the part of property of a state-(100%)owned company in exchange of the debts, which were encumbered with the former enterprise or State Treasury,
- creating on the basis of one unit (producing department) a joint-venture company, using the infrastructure of all the remaining enterprise,
- simultaneous transformation and possible sale of several enterprises with similar range of production to various investors within one branch of industry,
- programme of grouping of a dozen or so enterprises within national investment funds (so called mass privatization programme),
- disposal of the property of the former enterprise on the basis of insolvency (bankruptcy) law,
- setting the new enterprises on the basis of taking over licences (concessions) for excavating minerals,
- increasing of equity capital of existing state-owned company by a new investor,
- division and uniting enterprises within existing law.

Please note that some of these processes are connected with signing by a new owner various obligations. The examples of these obligations are the obligations to create new jobs or to invest the agreed amount of money. As it was mentioned earlier, under the terms of many bills, the different organs of state administration i.e. vojevods or ministries have the right to act on behalf of State Treasury.

2 ENFORCEMENT TOOLS VERSUS PRIVATIZATION PATHS

It was established that some enforcement tools are not effective for some privatisation paths or they give the opposite effects for them. Some important examples are given below, I hope they will carry this point.

2.1 Charges or ecological taxes

The existing system of financial tools consists of collecting charges from (mostly state - owned) enterprises in order to finance capital investments of protective equipment in other enterprises. Charges are paid for the amount of emission which is within the range of the obtained permit. In practise it is the considerable redistribution of capital which can be allocated to various aims. At present substantial part of foreign investors, which want to take over the enterprises, demand temporary releasing from charges, usually until they recover the invested capital. Previous payers, i.e. the big state-owned firms which are in the difficult economic position, cannot bear the due charges. This situation puts slowly the whole system out of order. New payers, which are small private enterprises, are numerous but very little, sometimes the expenses of obtaining the charges exceeds their value.

The only privatisation path, on which charges gave the significant result is the capital privatization method. Potential investors stated that the existing level of charges is an effective encouragement to modernize technology quickly. The charges stimulate to build proper protective installations. Pulp and paper industry and heavy chemistry industry can be the examples.

Conclusion:

The imposition of charges for the using of the environment is the appropriate tool for achieving the desired direction of restructurization in the capital privatisation process. This tool is not valid for the paths where numerous little firms are converted.

2.2 Monetary fines and other administrative penalties

It was established that the penalties inflicted for single offenses areas a rule much more low in value then existing obligations among enterprises. These debts exceed many times those

inflicted fines. Additionally the biggest debtor of the enterprises is often State Treasury. The debt of the Treasury and the mutual debts of the enterprises disturb the influence of fines. Some debts of the state-owned firms are, at the moment of transformation, taken over by the Treasury. Some of the enterprises know it, they do not even appeal against fines but they do not pay them.

The powers of the enforcement agencies are defined by law. There are some other administrative tools among them, too. The agencies can order the firms to install new sampling and monitoring devices or to design and to build new, proper waste collecting facility. The firm managers can be compelled by additional fines to meet the obligations. Ministry of Ownership Changes hold sway over the managers of the firms. During the preparing to the sale deal the managers cannot to undertake to start new big investments. For example the managers of the big pulp facility has obtained the written ban on starting the new waste water treatment plant until the sale deal is over.

Conclusion:

The imposition of monetary fines is not the useful tool during ownership changes process when there exists the big amount of mutual debts between State Treasury and the state-owned enterprises. The administrative orders for new environmental protection units are not the efficient tools if this firm is going to be sold recently.

2.3 Strict administrative prohibitions, among them bans on some kinds of imports, exports and the preferential customs duties

In Poland many administrative rules concern the materials and products in aim to achieve:

- the better sanitary control,
- elimination of products which contain environmentally dangerous substances,
- suppressing the production of some kinds of wastes,
- concessions for firms dealing with some kinds of substances.

All this bans are easy to impose. The practice shows that the majority of work is for the customs officers not for the environmental protection agencies. This type of ban would be advantageous if the customs were without of job but it is hard to achieve when there are many neighbour countries with different economic situation. The customs must prevent the smuggling of more important items eg. arms, narcotics etc.

Those bans have the strong influence on the industrial practise, not only on the ecological situation of our territory. The ban on import of wastes deteriorated the economic situation of paper industry but its influence on the ecological situation in the whole was small. So far this ban has not given the stimulus for collecting the paper wastes. The ban on import of all kinds of scrap gives the job for little smelting factories abroad. The ferrous and nonferrous scraps are processed into bars or plates before entering Polish territory. The lifting of this ban would give much more cheap metal in our market and the bigger unemployment in the Polish mining industry, too. The diminution of customs duties on coal tar (for stopping its production in Poland) has caused the overproduction in Poland. Polish coal factories have not been able to sell their tar, which every day was produced as an additional by-product during the production of coke. The diminution of customs duties on asbestos - containing products (for stopping their production in Poland) has caused that the prices of imported asbestos-cement pipes were lower than the other iron or PVC pipes. The administrative bans or preferential customs duties can be applied only for simple, clear situations. At the process of ownership changes majority of foreign investors attacks this system. It does not give them the feeling of stability although their investment would be good for ecological situation. All administrative bans are unpredictable, they depend on the political ideas.

Conclusion:

Bans against the import of selected items or preferential customs duties have achieved the results only in some cases. The abuse of the bans gives many bad side results, especially during the ownership changes process.

2.4 Suspending of some types of production or decreasing its scale

Stopping of the unlawful production activity is possible but very rare. Usually it concerns only little and unimportant units or machines. All the processes of ownership changes are connected with the painful process of conscious changes. Millions of people have found themselves in the market economy for the first time in their life. They try to preserve their jobs. Their protests grow stronger and more desperate. In such circumstances instead of the direct stoppage of production there can be used some other indirect methods.The best example is the situation of one southern district (vojevodship). In this area at least 60% of all workforce is connected with mining and smelting industry. For the economic reasons at least half of them ought to be made redundant. For the ecological reasons the output of this mine and smelting enterprise ought to be reduced by half. Approximately 70% of the workforce in this enterprise ought to be dismissed because of the economic and ecological reasons. This would leave 42 % of the working population temporary unemployed in this area. Such decisions would cause high political instability.

Conclusion:

The stoppage of the production by administrative orders is not the best method against the big state-owned enterprises.

2.5 Indirect methods

The first indirect method has been applied. The representatives of environmental agencies (PIOS, Ministry of Environmental Protection) has participated in the committees preparing the restructurization programmes for some industrial branches. Such programmes are connected with liquidation of some enterprises and assigning credits for some other ones. Such participation can be much more efficient now.

Our agency possesses as detailed information as Ministry of Industry about the present situation and production of the industry. At present, on the basis of new act, passed in August 1991, the new, centralized and efficient structure of the State Inspectorate for Environmental Protection has been established. It consists of 49 inspectorates with the laboratories and inspection teams. The regular inspections of the biggest industrial enterprises give the possibility to evaluate the basic economic and ecological changes in the various industrial branches. These data, aggregated in the computer system of the Chief Inspectorate, can help during the discussion with the Ministry of Industry and Trade and other governmental and non-governmental agencies. The only problem is the implementation of our opinions in the final decisions.

The second indirect method has been proposed quite recently. It is cooperation with banks, especially the banks which analyze the credits for new industrial activities. At present the nine biggest banks make the "restructurization" of their credit portfolios. They want to stop credits to the worst enterprises and they need the most detailed information in this subject. The stoppage of the credits for the old enterprise is sometimes the good, quick and efficient method of fighting against pollution. It is the better method than the imposition of administrative orders done by environmental agencies. There has been organized the first course for the credit department employees recently. They have been informed about the new rules and their future implementation.

The third indirect method is considered now. It would be the cooperation with the State Commission for Securities. This agency controls all the documents of the firms, whose stocks will be in the public trade. This commission can suspend its decision until the firm will obtain all the

needed environmental decisions and agreements. If any firm try to sell its stocks, it will be obliged to show the proper environmental audit. The sale of stocks to the public ought to be connected with the proper information for the potential buyers. This method can be applied to the minority of privatisation paths only. Not all of them go through this public sale of stocks. This method is the most efficient on the path named "manager contracts", where the reward for the managers is paid as an agreed percentage from the value of the sold stocks. It can be applied for the paths named "the employees in a leveraged buy-out" and "mass privatisation", too.

The fourth indirect method originated after the agreement between Ministry of Environmental Protection, Natural Resources and Forestry and Ministry of Ownership Changes had been signed. This agreement proposed to organize the Constant Interdepartmental Team for solving the problems on the border between the privatisation and ecology. This team will help to exchange the information and it will propose the changes to the existing privatisation and ecological acts. At present majority of potential foreign investors wants to obtain the information about the ecological situation of the enterprise which is put out for sale. This information ought to show some kind of "compliance schedule" for every part of this enterprise.

Conclusion

There are many indirect methods which can be applied by environmental agencies during the ownership process. They can give the desired results if the appropriate tools are chosen.

2.6 Compliance schedules

Compliance schedules would be supervised agreements between environmental agencies and enterprises. There are some practical problems which suppress the implementation of this tool:

- The Polish administrative code does not give the permission for the government agencies to sign the agreements with the firms or private persons. The agencies can only give administrative orders, although some of these decisions can be more flexible with data of their implementation. No agency can give the permission for temporary repealing the law. It will be possible if the parliament changes this above mentioned act.
- The multi-year experience of Polish ecology is against the above mentioned agreements. The managers of Polish enterprises have not taken into consideration some of the previously signed agreements. They are under influence of workers, Ministry of Industry and Trade and the deteriorated economic situation of their factories. There is a lack of efficient fines for not executing this schedules.
- The Polish ecological law is based on administrative law. It gives high possibility of political influence on decisions. The agreed schedules would be opened to influence during the course of their implementation. The civil law is usually much more independent from political changes.
- Every schedule must give the permission for not paying the fines and charges during its implementation. It gives the economic entity involved better situation than the other ones. It can be very important factor during the sale of the whole industrial branch for the foreign investors. The privileges for one enterprise will be the reason for obtaining this same privileges by others. The whole system of collecting the fines and charges can be destroyed.

Conclusions:

The implementation of the compliance schedules needs the changes in Polish ecological and privatisation law. It gives much more power into the hands of negotiators but it will decrease the amount of fines and charges paid by enterprises. This money has been used for new pro-ecological investments. The compliance schedules ought to be done with some kind of judicial procedure and the agreements ought to be signed under the civil law. In this way they would not be susceptible to the political influence.

2.7 The other underestimated tools

There are many provisions in Polish law which gives the possibility to implement some enforcement decisions.

- Article 432 of Polish Commercial Code gives the opportunity of increasing the capital of joint stock company. It has been used as a tool for investing into new protection unit for one zinc and lead processing plant.
- Article 21 of Polish Privatisation Law gives Ministry of Ownership Changes the power of the enforcement of organizational and technical changes in state-owned joint-stock companies. PIOS tries to achieve the substantial technological change in one of the biggest Polish non-ferrous metal processing plant.
- Article 20 of this Privatisation Law gives Ministry of Ownership Changes the power to state the scope of economic and technical reviews of state-owned enterprises. It can be used for implementation of the environmental audits for every privatisation path.

The State Inspectorate for Environmental Protection aims to implement the environmental audits for all privatisation paths. It is needed especially for liquidation path, where some wastes, buildings and ground are left. Although environmental impact assessment exists in the Polish law, it is not suitable for application in all privatisation paths.

The lack of the special provisions impedes the judicial enforcement of the privatisation mistakes. I think that civil judicial enforcement is the last and only way for "liquidation" route connected with the dissolution of an enterprise. After the liquidation or bankruptcy of the enterprise only the fines against the last managers of this firm can give the desired effect.

Conclusion

It is imperative to change the Polish bankruptcy and liquidation law and to implement the solutions known from other countries. At present bankruptcy law is from the year 1934 and it has no ecological provisions.

3 ENVIRONMENTAL AUDITING

Polish environmental protection agencies have proposed the method of environmental audits for the privatised or proposed for privatization enterprises. It is based partially on "Generic Protocol for Environmental Audits at Federal Facilities" from USA and on the basis of own experience of its authors. This instruction has not been implemented yet. Ministry of Ownership Changes has not agreed yet for implementation of the audits. Only one path (so named "capital privatisation") is connected with environmental audits.

This is partly due to the fact that the use of the Privatisation Law has brought some deficiencies to light, on the other hand problems are caused by the fact that some political forces try to speed up the whole process.

There are the problems of money for those audits and finding the specialized teams. These technicalities can be solved with cooperation with many Funds and Programmes for Help for Central and Eastern Europe.

I think that the environmental audits during the privatisation ought to answer the five or six questions:

1. What is the present ecological situation of the firm?
2. What ought to be done for achieving the compliance with the Polish (and EEC) rules?
3. What kind of the administrative decisions are needed?
4. How much will the whole restructurization process cost?
5. Who will be responsible for implementation of the results of the audits (new owner, State Treasury. Ministry of Privatisation etc.)?
6. What kind of legal tools ought to be implemented during the sale deal?

The majority of audits gives only the answers to the first question. The audit of the Polish oil and gas industry is the best example of this type of audit.

The answer to the second question needs collecting the environmental requirements from various involved parties. The answer for the third question is crucial for new investor who wants to have the stable situation. The answer for the fourth question is important during the sale deal of the firm or the assets. The fifth question is connected with the problem: 'Who will announce the inevitable shut-downs?". The sixth question can be answered by the legal advisors to the government of Poland.

The more complicated issue is the implementation of the results of those audits. Their results give the big job for Ministry of Ownership Changes. It must restructurize these enterprises, to divide them or/and to clean their area. It must change the normal way of their sale and negotiate the special contracts. Nobody likes having more work. If you want to sell the car you ought to repair the tyres, to adjust the engine and to wash the body. Ministry of Ownership Changes would achieve the better prices if it made this effort on the basis of the results of the audits.

Environmental audits would give the new requirements for these enterprises. Ministry of Ownership Changes would be obliged to consider them during the sale.

Environmental requirements will be put forward by:

- firms performing these audits,
- inspectors carrying out normal controls of these facilities,
- voivodes and environmental division subordinate to them,
- independent ecological organizations,
- other law entities, which are personally interested in this matter.

Environmental requirements will be determined before the consent for a particular stage of ownership transformation is given. In many cases environmental requirements will be a matter of negotiations with potential investors. I am convinced that such an approach will be approved by those who want to understand the obligations they will have to fulfil, as well as by banks which prefer to avoid granting credits for investments, whose accomplishment, for ecological reasons, will not be possible.

The examples of determination of those requirements are:

a) For plants operating on the basis of old-fashioned technology, with a lot of "past contamination" cases, there can be imposed the following conditions:
   - until a deadline, eliminating past pollution which still endanger people.
   - sharing of costs for eliminating other kinds of pollution which do not directly endanger people can be negotiated if by a certain deadline the plant will modernize its technology to the level meeting the environmental standards.

b) The plants overexploiting natural resources will for sure have to limit their production to the level ensuring reasonable management of those resources.
   - the deadlines for recultivation of degradated areas and waste disposal sites can be negotiated.

c) For the plants whose legal situation would qualify them to be closed (due to the lack of water permits or exceeding the standards for emission to the air), the main requirement will be the deadline to satisfy legal requirements. This date will be determined as technically possible and comparable with deadlines imposed in such cases in EEC or USA.
   - ways of clarifying the legal situation will be the matter of interest of the given plant. However, in Poland it is not possible to grant a water permit if the plant does not have environment protecting equipment.

d) For plants whose difficult economic situation results from high penalties for violation of environment protection rules it is possible to postpone the date of payment if they are accomplishing the investment that would eliminate reasons for that penalty.

The fulfilment of the obligations included in privatisation contracts will be controlled and executed by State Inspection for Environmental Protection.

The ownership process in Poland needs the environmental audits. The decision is in the hands of Ministry of Ownership Changes. Now the majority of foreign investors demand the proper audits or they do them themselves. The cost of an audit is shared by the Ministry and the investor.

Conclusions

The sale deals need the proper evaluation of the firms. The environmental audits ought to be the basis for the desired restructurization or the sale of the firm. Somebody ought to be responsible for the implementation of their results. The price for the enterprise with complicated legal, environmental and economic situation is lower than for the other one. The idea of "quick privatization" would give more troubles with ecological problems

4 EXAMPLES OF 'ECOLOGICAL SEMAPHORES'

There are eight examples of "ecological semaphores" shown in this chapter. They cover the majority of existing ownership paths. I think, that every new path ought to have its own point of ecological supervision.

4.1 Improvement of efficiency of financial penalties paid by enterprises.

It would reasonable to establish a new kind of fines for enterprises that are subsidised by the State Treasury. Normal financial penalties are not effective against such firms because they obtain from Treasury a fixed amount of money which is bigger than their fines. I think that the Environmental Protection Act ought to be changed by adding one sentence:

"If economical entities obtain (indirectly or directly) subsidy for its activity from State Treasury and encroach beyond the limits of emission the additional financial penalty is imposed on the responsible manager of this firm. This supplementary penalty, equal to the amount of single average monthly salary of this director (president) is paid by him. The fine is announced twice in the regional newspaper covering the area of firm activity."

4.2 Reinforcement of protection against leaving the ecological damages during privatization of the state-owned enterprises

Recently, a proposition has been put forward, to add one sentence to the Council Ministry Decree on the register of the state-owned firms. The vojevodship inspectorates for environmental protection will be able to oppose the enrolment (registration) of the liquidation, division or joining of the state-owned firms. They will be able to demand the additional reviews if they suspect that this decision would be detrimental to the environment. The most important is obtaining the answer to the question who will be responsible for the accumulated wastes on the ground of the former state-owned firm.

The second method of the strengthening of this protection will be incorporation of new sentence into the Geology and Mining Law. This sentence will make "the recultivation fund" compulsory. At present many state-owned mines are in very bad economical situation. They do not accumulate capital for recultivation and this situation is highly dangerous for the environment. There ought to be done special provisions for the bankruptcy law which can be used during the special situation of the mine bankruptcy.

4.3 The protection against the import of the "dirty technologies"

The act on the establishment of the office of Ministry of Environmental Protection, Natural Resources and Forestry gives this Ministry the task to verify the technologies which are implemented in Polish industry. There are no other special acts on this subject. I think that this

office will organize the special group for implementation of this task. This group ought to define the rules and scales for verification.

It seems proper to add two sentences to the act on the limited companies with foreign partnership. This act would state the supplementary rules for the creation of this firms.

"The formation of the firm, which will produce wastes in the amount bigger than 10 tons per year or the dangerous wastes in the amount bigger than 1 ton per year, ought to be done by special additional permission. The use of the technologies which are forbidden in any EEC country needs the special permission, too."

This proposition will be considered soon.

4.4 Environmental audit as an indispensable part of the documents for the application to the Stock-Exchange Commission

It seems to be useful to add to the "Law on Securities Trading and Mutual Funds" a new item needed from an emitent (i.e. a person initiating offering stocks). This supplementary information ought to be render accessible to the public and it ought to contain financial situation, profits and losses, economical prospects for this firm and the results of ecological audits of its factories and area."

This proposition will be considered soon.

4.5 Supervision over the liquidation process of the state-owned enterprises

It seems to be useful to add to the article 37 of "Privatisation Law for State-Owned Enterprises" (i.e. so called "liquidation article") a sentence which will explain accurately the transfer of ecological liabilities during this process.

The second supplementary item ought to guarantee that the decisions regarding the stoppage of the ecologically detrimental production are valid against new economic entities, too.

The new Council Ministry Decree on the method of liquidation of the state-owned enterprises ought to explain hitherto existing problems with the remained contaminated areas, rents for the ill workers, unpaid fines and charges, the costs of demolition and recultivation.

4.6 "Ecologization" of the mass privatization process

It seems to be useful to impose the obligations on the investments funds created within "mass privatization" process. These funds ought to take into consideration the aims of eco-development. It can be achieved by simple financial stimulus which is usually better than no matter which persuasion.

"The agreement between a fund and a managing firm should include the obligation to perform ecological audits and use its results in companies, in which a stockholder is a fund. The salary for the management of the fund is reduced beginning from the second year of management by the amount equal up to 10% of the value of financial penalties paid for breaking the environmental regulations by the companies, in which the main stockholder is a fund. The value is calculated with regard to the share of this fund in the total capital of the firm."

This provision was proposed in April 1992. Since that time Ministry of Ownership Changes and the group of foreign advisors have tried to block the incorporation of this provision into the "Law on Mass Privatization of State-Owned Enterprises". Instead of this they have incorporated at least several enterprises with bad ecological situation into this process.

4.7 Ecological items for Bankruptcy Law

It seems to be useful for the organisations interested in protecting environment to bring on the amendments of the article 204 of "Bankruptcy Law". The ecological debts (payments and penalties and the cost of recultivation) ought to be included among preferential claims. These debts should be estimated by the means of an audit.

4.8 Ecological tools in management contracts

It seems to be useful to impose a little ecological provision on the management contracts signed in a virtue of the article 45 of the "Law on the State-Owned Enterprises". Such clause would be connected with the method of calculating the earnings of those managers.

"The criterions of estimation the effectiveness of management are established with regard to the results and changes in environment which has been done during the contract. Payment of the agreed amount of shares, mentioned earlier, can take place only after proving that in duration of the contract the reduction of the value of an enterprise for the reasons connected with environment have not occurred."

The Polish environmental protection agencies have numerous examples when the managers of the firms (state-owned, private, cooperatives etc.) achieved quite good economic results by the method of accumulating wastes on the territory of their firms. The wet method of production of titanium dioxide with producing ferric sulphate is the biggest one.

5 OBJECTIVES FOR THE NEAR FUTURE

The most important task in the near future is introducing to the privatization the ecological provisions. I hope that these provisions will give the positive results. It will make possible to avoid some mistakes which has been done in this process before.

Next task is to convince all the foreign investors that without proper approach to this problem they would not achieve the results. We observe positive changes in this approach in a form f.e. declaring a considerable part (even to 30%) of the value of future investments for investments improving ecological situation of the enterprises which are being taken over.

6 CONCLUSIONS

This paper, prepared for the panel speech #19, examines the remedies available to the various ownership changes processes. The author hopes that the presented solutions are not the only effective steps. The privatization process is so swift and alternating (like a mountain river) so not all "good advices" can be used. PIOS negotiates with the representatives of Ministry of Ownership Changes the most appropriate approach to the above-mentioned problems. The implementation of the environmental auditing for the capital and liquidation paths is one of the desirable results. The information for the supervisory boards deals with the inevitable changes of permissions and their results (new charges and fines).

The conclusions and suggestions put forward in this material are being prepared or accomplished at the moment. We hope that common action of many people will make possible their effective application.

The opinions expressed in the present article are individual opinions of the author and they are not necessarily correspond with official, being in force direction of activity of Polish government agencies.

ENFORCING THE LAW AT GOVERNMENT OWNED OR OPERATED FACILITIES

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SUMMARY

Under the circumstances of the command economy the interests of environmental protection were pushed into the background because of considerations underlying the socialist model of economic development. State decisions were enforced practically without opposition, which lead to a catastrophically high level of environmental pollution.
After the transformation of the economic and political system the necessary democratic procedures required for the settlement of conflicts between state, regional and local interests have not been formed yet. The enforcement of environmental protection interests is still very difficult because of the delay in the re-creation of the relevant legal regulations inherited from the previous regime, real or seemingly important sociological considerations and the still significant proportion of state owned companies.

The transformation of environmental legislation, its adjustment to EEC guidelines, and the establishment of the funding of environmental protection independently of the state budget are urgent necessities.

1 INTRODUCTION

In the West it has frequently been assumed that under the circumstances of a command economy and the dominance of state ownership it is extremely easy to harmonise interests and to enforce the law. Our experience however has proved that the exact opposite is the case. The merging of the state's economic and administrative functions in most cases resulted in the state's economic policies being based on ideological and strategical considerations, which led the national economy to disastrous consequences in the short term, while with regard to environmental protection it led to compromises which are now endangering our natural resources. In Hungary, which was the first country in Europe to pass strict laws on environmental protection (the Law on Water Resources), as well as regulations concerning the protection of the quality of water resources of 1961, which could have provided up-to-date legal guarantees in this respect, these laws nevertheless failed to fulfil their function because the state's political and economic structure did not allow the consistent enforcement of these regulations.

In fact, legal regulations were mercilessly enforced against private individuals, sometimes even overstepping the law's own limitations, while organisations owned by or entrusted to the state were to all intents and purposes above the law, as a result of the political standing of their leaders: they alone enjoyed all the advantages of the state's protectionist policies.

In order to be able to assess the impact of the changes that have recently taken place in the Hungarian proprietary system it is necessary to give a brief summary of the history of the environmental legislation which is still in effect today.

2 ENVIRONMENTAL LEGISLATION

The 'buds' of environmental legislation were present as early as the Law on Water Resources which was prepared in the last century. This law assumed its up-to-date form in Law IV of 1964. One of the first legal regulations in Europe on the protection of the quality of water resources came into being in 1961. This regulation set the maximum limit for the issue of various types of sewage and prescribed a penalty fee for those exceeding these limits. This was modified several times later on, but an exclusive right of decision in these matters has always remained in

the hands of the Chief Authority, governed in accordance with political (economico-political) or other considerations.

The first law on the protection of the environment, regulating the management of the individual elements of the environment as well as the utilisation of these overall, was passed in 1976. Separate laws regulated the protection of the quality of the air (1986), the conservation of the environment (1982), the management of dangerous waste (1981) and noise prevention (1983). Between 1964 and 1988 more than a hundred laws, including national standards, were indirectly concerned with environmental protection issues.

It was characteristic of the party state legislation system that laws on the same subject, but passed at different levels of the legal hierarchy, contained ambiguous or even contradictory regulations. In order to put an end to this a major overhaul began in 1987 and still remains to be completed.

It was characteristic of all legal regulations passed under the command economy system that they allowed not only legal and other necessary exceptions to the law, but also some which were dependent upon the economic and political leadership then in power.

A classic example of the above, in fact the subject of longstanding practice, was that the Head of the Hungarian Office of Water Affairs was entitled to reduce the amount of the penalty fee established by a court (he could in fact completely abolish it) if the penalty fee was more than the relevant company could afford to pay.

Another example of such anomalies, although in this case lacking any legal justification, is that drains owned by or entrusted to the state, even though they heavily polluted the environment, were for many years exempt from penalties, and when a legal process was initiated against them, the court established an unrealistically low penalty fee.

Similar cases could be cited from the area of legislation concerning the protection of air quality, too. The management of dangerous waste remained legally unregulated over a long period of time, and even when the relevant legislation was finally passed, it was not enforced against Soviet and Hungarian military and national defence organisations. The discovery of dangerous waste by external institutions was hindered by the fact that several of these establishments were managed under conditions of tight security. This meant that even if it was suspected that dangerous waste was not being managed in accordance with the relevant legal regulations no legal process or investigation could be initiated and consequently no penalty could be imposed on these establishments.

3 THE PRESENT SITUATION

After the commencement of the transformation of the political and economic system in Hungary the legislative system has also undergone both formal and substantial modification. In accordance with the legislative practice of parliamentary democracies; along with the fact that the range of Parliament's authority has significantly increased, codex type laws have now come to the forefront. 40 years of communism distorted all legal institutions, and thus virtually all legal regulations - from standards to laws - must be either modified or completely transformed. It is understandable that the supervision of legal regulations related to environmental protection has not yet been carried out and the new law on the environment has not been prepared despite the fact that the overall concept of the new law has already been worked out.

In the new situation establishments operating under the circumstances of a market economy and polluting the environment are subject to legal regulations established for a command economy, something which inevitably leads to a number of difficulties in the enforcement of the law. As a result of the transformation of the proprietary system ministerial decrees, formerly applied exclusively in relation to state owned legal entities (or legal regulations of a lower category) need to be extended and interpreted accordingly, which may occasionally raise the question of the legitimacy of these regulations. The preventive power of presently valid legal regulations has decreased, the system of environmental financing has not yet been formed and the financial situation of potential polluters - especially in the case of companies in which the

state is still a majority proprietor - significantly hinders the enforcement of financial sanctions against them.

Those polluting the environment may be divided into three main groups in accordance with their form of ownership. The first group still continuing to cause the greatest amount of pollution are manufacturing and service providing companies in majority state ownership.

The second group consists of companies transferred and to be transferred into local council ownership. The range of companies in majority ownership is increasing. It is hardly at all possible to enforce environmetal requirements on the first group for which there are two main reasons:

1. Most manufacturing companies utilise out-dated technology, their sites are overloaded and they cannot afford to install the approapriate environmetal protection eqiupment.
2. Most state owned enterprises do not produce substantial profits, as a consequence of which they cannot accumulate resources and therefore they cannot afford to invest in nonprofit making activities. Because of their lack of their solvency financial sanctions against these companies remain inefficient. Despite of the above the maintenance of these companies is necessitated by certain other considerations.

Sources of pollution belonging to the second group are in a similar situation as those in the first group with the only difference that they are less subject to state preferences and therefore the enforcement of environmental requirements seems to be more likely for them. It must be noted however that the transfer of certain manufacturing and service companies into local council ownership began only a year ago and has not been completed yet. Consequently, certain extra legal considerations justify a certain period of moratorium with regard to them, with exception of outstandingly damaging sources of pollution, of course.

No sociological obstacles stand in the way of the enforcement of the law with regard to enterprises in majority private ownership because the state operating its administration does not have to take into consideration extra legal factors. It must be noted that newly formed private enterprises seldom utilise outdated technology. Most of them try to meet EEC standards from the commencement of their operations. In the case of a number of enterprises however the company's transformation into private ownership does not bring about the transformation of the relevant company's structure and technology in which case the polluting of the environment continues to take place. In such cases as these the taking of measures is perfectly feasible.

4 LEGAL MEASURES IN THE SERVICE OF THE ENFORCEMENT OF ENVIRONMENTAL INTERESTS

The only measures presently available for the enforcement of environmental requirements are those left behind by the previous regime.

4.1 Standards

The working out of standards serving the enforcement of environmental requirements has already begun but this activity is at present restricted mainly to emissions and methods of their measurement. Technological standards concerning individual branches of industry and the service sector have not yet been worked out. The adoption of EEC guidelines is in process.

4.2 Criminal law

The Law on Environmental Protection and the Criminal Code contain the notion of environmental crime but the legal elements of this crime have yet to be given a detailed interpretation. With the exception of a number of outstandingly serious cases institutions dealing with criminal matters have not reported on such cases officially. In order to be able to enforce the law the offence must be specified by the legislator in detail in order to make possible its

prosecution if serious damage has been caused to the environment even if no harm has been inflicted upon human life, health and property.

4.3 Licensing

The most important measure serving the enforcement of environmental requirements is licensing which looks back upon a relatively long history in Hungary. Activities influencing the natural condition of water resources could not be conducted without a license after the Law on Water Resources was adopted in the last century. Later the Law on Environmental Protection made licensing obligatory for the utilisation of air and soil too. The requirement of a license in order to be able to conduct activities influencing the condition of the environment however failed to improve it. Deviation from the practice and unlicensed activities were sanctioned only by the imposition of penalty fees. It was also difficult to control the fulfillment of conditions laid down in these licenses. In several cases the establishment of sewage purifying or smoke filtering equipment was prescribed by the environmental authorities and although these were either not installed at all or their quality failed to meet the relevant standards. The authorities did not take further measures against these manufacturing or service activities.

In the course of the updating of the system of legal regulations concerning environmental protection the rules of sanctioning will presumably also be modified.

4.4 Penalty Fees

The most efficient legal measure serving the enforcement of environmental protection interests has been and still is administrative penalties despite all the defects related to this measure . The most important penalties are for air pollution and sewage emission.

Penalties for sewage emission were first regulated in 1961. This regulation has been modified several times since then and at present this regulation prescribes 30 various limitations in this respect regulating the quality of sewage which may be emitted. The limit values prescribed by the regulations depend on the protection category of water resources and the penalties to be imposed may be increased or decreased by several modifying factors.

Despite the classification of emission limit values as described above local circumstances and the level of 'saturation' of the environment were taken into consideration hardly at all and this system failed to promote the transformation of technologies used by companies polluting the environment.

Basically the same can be said in relation to penalties for air pollution.

It is certainly true that as a result of the imposition of penalties the increase of the level of environmental pollution came to a halt. This process was noticeable primarily in the case of industrial companies.

Organisation

Until the 1970s the protection of the environment had been basically restricted to the protection of the quality of water resources. The Hungarian Environmental Council, later Environmental Office, commenced its activities as an independent organisation. Later, having merged with the Hungarian Office of Water Management, the Hungarian Environmental Office continued its activities until 1989 as the Ministry of Environment and Water Management, when, as a result of the transformation process, water management affairs were transferred to the Ministry of Transport, Telecommunications and Water Management. Regional development was transferred to the Ministry of Environment.

The separation of water management affairs from the Ministry of Environment seems to be a mistake, because it has resulted in ambiguities with regard to executive activities as well as the distribution of the range of authorities belonging to these two spheres. Parallel ranges of authority and procedures have been formed as a result of this decision, which has led to an increase in administrative expenses related to environmental protection and water management, significantly increased staffing levels, and at the same time, because of the division of authorities between the two spheres, brought about the decrease of the efficiency of their activities.

Before the transformation of the economic and political system public opinion could not be enforced with regard to the licensing of industrial activities affecting the environment as a result of the lack of organisational conditions necessary for the enforcement of local interests. The attitude of the command economy was the reason behind such a situation, because it did not allow the enforcement of alternatives different from the considerations of central planning. After the transformation process the situation has fundamentally changed. It is a well known fact that under the previous regime the opposition's first activities were centered around the issue of environmental protection. Similarly, after the completion of the transformation process signs of democratisation first became evident in the course of public debates concerning environmental protection. Despite this, because of the lack of a proper organisational framework as well as the underdevelopedness of democratic procedures in local councils, the general public has participated in the actual effective decisionmaking process only with great difficulty and in many cases, unfortunately, with a negative effect. It is especially true in relation to cases where the state tries to implement investment serving the interests of the country as a whole against local interests, including the storage of dangerous waste, the planned locations of which could not be established because of the opposition of the local population.

THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S INTEGRATED MANAGEMENT STRATEGY FOR ENVIRONMENTAL COMPLIANCE BY THE FEDERAL GOVERNMENT

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SUMMARY

The US Environmental Protection Agency (EPA) uses integrated management strategy to promote sound environmental practices among federal agencies. This strategy integrates enforcement, cooperation, and rewards in a continuum of relationships with the other federal agencies.

EPA's challenge in federal facilities enforcement is substantial. The federal government employs over 2.5 million people, and occupies 387,000 buildings. It has 27,000 installations and is landlord of 729 million acres. This expansive presence requires that EPA regulate thousands of federal facilities and assist them in their environmental planning. (Appendix A)

The bedrock for the integrated management strategy for federal facilities is reliable data which identifies environmental performance at each governmental installation. EPA's data bases provide the information needed to target enforcement, cooperation, or rewards, as appropriate, to achieve reduction of environmental risk and to maximize pollution prevention.

Cooperation with other federal agencies is the normal mode of interaction, but regulatory sanctions will be applied when required to achieve environmental compliance. Specific enforcement initiatives complement other EPA initiatives whenever feasible to enhance the environmental benefit of both efforts. For example, achieving a high rate of environmental compliance and significant pollution prevention efforts at the many military installation fringing the Chesapeake Bay has been a significant part of EPA's geographic initiative to emphasize environmental protection of the Bay.

EPA is working with other federal agencies to develop a reward system which recognizes exemplary environmental protection, and again the Chesapeake Bay is providing an opportunity to tout federal environmental achievement. Last fall the Deputy Administrator of EPA and I toured the giant Norfolk Naval Base and gave a press briefing, praising the pollution prevention efforts there.

EPA encourages public awareness and participation as essential aspects of EPA's efforts to foster public confidence in the federal government's environmental record. The public needs to be aware of the federal government's environmental record in order to have sufficient knowledge to influence federal environmental decisions through publicity (adverse/adulatory) and participation in federal agency environmental planning.

U.S. Public confidence in the federal government's environmental record has been low but is improving now, and cleanup of hazardous waste at federal facilities is a major item of public interest in the U.S. EPA is certain that involving the public in the federal agency environmental process will improve the environment decisions made by the federal government, and the public's confidence in government.

1 INTRODUCTION

This paper will examine the elements that comprise the U.S. EPA integrated management strategy for environmental performance by the federal government. The goal of this strategy is that the federal government shall meet or exceed compliance with all applicable environmental law and regulations. The ultimate objective is to have the federal government set the standard for the entire Nation in environmental behavior.

To reach these lofty goals two fundamental things have to happen. First, governmental agencies must incorporate environmental goals into the performance of their governmental missions. Second, government employees must believe it is their duty to comply with environmental laws. In order for these aspirations to materialize as good environmental performance, certain irreducible elements of sound administration must exist.

The first element is that there be a body of law and regulation that sets forth environmental standards. In the United States, this consists of local, state and federal environmental statutes and federal regulations to which the federal government must adhere. These laws and regulations need to be written in a manner which specifies that the federal government is included as a member within the regulated community.

Although certain immunities or exemptions from the law for the federal government may be necessary to allow the exercise of the federal function, these immunities and exemptions must be narrowly drawn. The scope of immunities and exemptions must be limited to protecting only that activity which is essential to the accomplishment of the missions of the federal government and, when possible, further limited to shielding only activities which are uniquely governmental. For example, an exemption from vehicle air emission standards should be drawn tightly enough to exempt military tanks and other combat vehicles, but not exempt general purpose automobiles used in the Department of Defense (DOD) Headquarters motor pool. The governmental mission being protected is national defense, and only so much Department of Defense activities as are uniquely military (e.g. vehicles used for combat) should be shielded from compliance requirements. In the U.S., overly broad sovereign immunities often have led to friction between the federal government and the public because they appear to allow the government to go unpunished for violations of environmental law which are essentially the same violations that are punished when committed by anyone else.

The second element is that there be an agency or agencies responsible for regulating the behavior of the rest of the government. The U.S. EPA is one such agency. Other federal agencies regulate other aspect of environmental law. State governments have analogous agencies.

The third essential element is technical assistance and training. The regulator and the regulated community share responsibilities to develop curricula which go beyond merely teaching employees how to achieve technical compliance, and which promote an environmental ethic.

Fourth, regulatory agencies must assess environmental performance and advise the regulated community on how well they are doing and where environmental performance can improve. The regulated community should be encouraged to establish auditing and analytical capabilities for internal use also so that they can assess their own environmental strengthens and weaknesses, and improve their performance without the assistance of the regulatory agency.

No amount of inspecting, reporting, monitoring and self assessment, or other monitoring, will be successful, however, unless there is a plan by which environmental requirements uncovered by monitoring can be programmed for and funded. In the U.S. Government, there is a process by which the federal agencies can identify their capital construction and other environmental requirements, so that those items can be properly accounted for in the federal budget. The U.S. EPA plays a role in this fifth element of sound environmental administration. EPA has the opportunity to review and evaluate the other agencies' proposed plans prior to their budget submissions. Theoretically, this process provides a mechanism for the proper allocation of resources to achieve, maintain, and even exceed, environmental compliance. In practice, this process has been cumbersome, resource intensive, and has not always identified and funded projects in a timely manner that avoids noncompliance with environmental law.

The final element to a successful compliance strategy is enforcement. Enforcement response is appropriate in instances when for some reason the other elements of a successful compliance program have failed to yield compliance. In these instances, a coercive response is necessary to convey the gravity of the failure to achieve satisfactory environmental performance. Enforcement action further establishes the benchmark from which a compliance agreement or consent order can be fashioned which will eventually bring the federal facilities into environmental compliance. EPA's enforcement options against other federal agencies are limited to administrative orders issued only after the opportunity is provided for the other agency to contest

the order within the Executive Branch. As discussed below, however, the enforcement available against federal facilities include enforcement by States and localities and by citizen suit. Taken together, the full range of civil judicial, criminal, and administrative options are available, except as limited by the sovereign immunity of the federal government and a almost never exercised possibility of a short duration Presidential exemption from law.

2 THE INTEGRATED MANAGEMENT STRATEGY

2.1 Legal and Regulatory Authority

Major federal environmental statutes require environmental compliance with specific criteria and standards established for different environmental media: air; water; and land. Other federal statutes prescribe compliance requirements for specific substances or classes of substances such as toxics or pesticides. One federal statute, the National Environmental Policy Act (NEPA), establishes a process which the federal government must use to analyze its actions which may affect the environment. Taken in combination, the federal government is thus required by statute to act in a environmentally conscientious manner. The statutes are then implemented by regulations and executive orders which require acceptable environmental performance. State laws generally have similar applications.

In the U.S. Executive Branch, Executive Order 12088 requires each agency of the federal government to comply with environmental law and cooperate with and consult with EPA, state, interstate, and local agencies in achieving compliance. Each agency is required to request adequate funds to comply with "applicable pollution control standards". The request for funds is submitted through EPA to the Office of Management and Budget (OMB). Agencies are then required to spend the funds for the environmental purposes for which they were requested. Executive Order 12088 authorizes the Administrator of U.S. EPA to resolve environmental conflicts between federal agencies, but if unable to resolve such controversies, the Administrator is to request the Director of OMB to resolve the conflict.

Permits, compliance agreements, and cleanup agreements are the primary mechanisms for translating statutory and regulatory authority into environmental performance and compliance standards for specific federal installations. These devices are what actually establish many of the environmental requirements which federal agencies must meet to comply with law, regulation, and Executive Order 12088.

2.2 Regulatory Agency Responsibilities and Organization.

There must be a repository within government that is charged with encouraging, assisting or coercing federal agencies to comply with the statutory and regulatory authorities. The U.S. EPA is one such repository agency. State governments have similar regulatory agencies and many municipal and county agencies also have regulatory enforcement responsibilities. This paper will focus on the federal level; specifically on U.S. EPA.

The U.S. EPA has found it essential to aggregate authority within the agency for regulating federal facilities on environmental issues. This has been done by forming two offices dealing exclusively with federal facilities. These offices are located within the Office of Enforcement, headed by the Assistant Administrator for Enforcement. Under the Assistant Administrator is a Deputy Assistant Administrator (DAA) for Federal Facilities Enforcement. Reporting to the DAA are the Office of Federal Activities (OFA) and the Office of Federal Facilities Enforcement (OFFE).

U.S. EPA could have chosen to replicate a microcosm of itself inside OFA and OFFE by giving these two offices authority to administer all aspects of all environmental laws at all federal agencies. Frankly, U.S. EPA lacks personnel and monetary resources for such an elaborate structure without sacrificing other valuable environmental programs. Further, an attempt to

create such a structure at the expense of other bureaucracies within EPA would have created unbearable intra-institutional friction. Neither the expense nor the fight could justify such empire building.

Consequently the offices responsible for overseeing the environmental performance for the entire federal government number just about 60 people total between them. Translating this to dollars and national agenda, OFFE (with less than 30 people) is responsible for overseeing the federal governments's approximately $9.5 billion cleanup budget for fiscal year 1993. OFFE will receive $30 million to fund its oversight of the $9.5 billion effort. To stretch $30 million of oversight over $9.5 billion of effort requires that OFFE carefully choose when to become involved in specific regulatory disputes. These limited resources are most suited to formulating policy providing policy advice. Even its policy role must be confined to applying policies developed by other programs to federal facilities, except when the matter is unique to the federal government or involves program administration. For example, OFFE will rely on the Office of Solid Waste and Emergency Response and the RCRA (Resources Conservation and Recovery Act) Enforcement Division for leadership on RCRA enforcement policy. OFFE will work together with these other entities and apply their general policy guidance in a way that makes sense for federal facilities. Finally OFFE will rely on EPA's Regional Offices and state agencies' to actually carryout the policy.

To summarize the organizational choices made by EPA in regulating federal agencies: OFA and OFFE promulgate policies and guidance limited to defining the application of environmental issues to the federal government. OFA and OFFE relate with the other program offices within EPA to ensure that environmental policy is applied consistently to other federal agencies. They also coordinate primarily with Regional EPA offices, and to a lesser extent, with State and municipal environmental regulators, who actually execute the regulatory actions at federal government facilities. Resource scarcity requires this institutional networking.

2.3 Training Technical Assistance and Compliance Monitoring

The history of environmental compliance at U.S. federal facilities has shown that a substantial portion of compliance problems can be remedied by proper education and training of personnel. Personnel who are adequately trained in the technical and ethical requirements of their environmental responsibilities, are essential for a good environmental record. Most environmental violations in the federal sector are equivalent to administrative oversight or lack of knowledge regarding simple, fundamental environmental requirements.

The bulk of training of governmental personnel has to rest with the agency with responsibility for complying with the law. Again, resource constraints are a major factor in allocating responsibility for training. U.S. EPA does not have enough personnel to conduct adequate training for other agencies. U.S. EPA however, can assist the regulated community in setting up training, and can provide selected training.

A second reason that the regulated community must assume most of the burden for education and training is that the needed expertise does not exist at EPA. EPA, for example, does not have staff who are experts in the industrial processes related to nuclear submarine maintenance. That expertise is with the Department of the Navy.

Professional engineering associations, educational institutions, and other experts and associations often will be better able to conduct seminars, formal education, or conferences on environmental topics that U.S. EPA. Training in environmental enforcement is, however, an example of an area where EPA is the appropriate educator. Our National Enforcement Training Institute (NETI) is supported by and part of the Office of Enforcement's (OE) National Enforcement Investigations Center (NEIC). NEIC is an organizational unit of OE having primary responsibility for providing technical support for EPA's enforcement program. NEIC provides technical support for federal facilities just as it supports other OE enforcement (as well as the Department of Justice, the FBI, and State and local law enforcement among others). The NETI courses are among the training and technical assistance available from NEIC. NEIC and NETI are two more examples of how the small OFA and OFFE staff can draw from other institutional resources to network into a vibrant national environmental program for the federal government.

A different example of building a national program with limited resources is the one person education staff supported by OFFE. The person is located in the field, not Headquarters. She teams with the U.S. Air Force to present a 3 1/2 day course which imparts baseline legal, technical, and community involvement aspects of hazardous waste cleanup work at Air Force installations. The course requires the Air Force and EPA participants to work together as a team to design strategies for dealing with a cleanup scenario. "Staff" for the course are volunteer EPA experts who to provide the participants with the legal, technical and community involvement requirements needed for the team to overcome their cleanup problem in a lawful, technically sound manner that has public support. This innovative effort provides a strong mechanism for establishing a better working relationship between the Air Force and EPA. The team approach helps transform an adversarial relationship between the regulator and regulated community into a team with extensive expertise to achieve common goals. It is an excellent example of an "enforcement" activity in the federal government outside of the command and control relationship.

I hope to offer this cross between training and technical assistance to other federal agencies to the extent a limited budget will permit. Technical assistance is provided by EPA to federal facilities in variety of forms. Workshops which provide technical details of implementing environmental requirements are a common form of technical assistance. Guidance documents and fact sheets answering certain specific technical questions are other commons forms of technical assistance. Both the Office of Federal Activities and the Office of Federal Facilities Enforcement have regularly scheduled information transfer meetings and perform clearinghouse and other information exchange functions for other agencies.

A trained work force needs a management structure which encourages the accomplishment of environmental objectives. Accordingly, EPA encourages other federal agencies to rate all personnel on their environmental performance and to periodically and systematically audit their environmental programs to identify actual and potential environmental problems. Personal accountability for environmental behavior and an effective environmental auditing program assist the regulated community to become more responsible for their environmental performance.

2.4 Compliance Monitoring

The federal government has not yet achieved a level of environmental performance that allows self assessment and self auditing by the regulated community to be the only means of monitoring compliance. Compliance monitoring by the U.S. EPA is required. Compliance monitoring can be broken into two categories. The first category is information provided by the regulated organization to the regulator. The information ranges from record keeping to periodic notification and reports of non-emergency and emergency nature. This information not only provides a profile of environmental performance, but also is a self disclosure of environmental non-compliance. Record keeping and reporting requirements under the Clean Water Act are a primary means of monitoring effluent discharges from permitted sources into U.S. waters.

Regulatory inspections, however, constitute the bulwark of compliance monitoring. U.S. EPA and other regulatory agencies within the United States conduct periodic inspections of federal facilities to ascertain the degree of environmental compliance. U.S. EPA coordination with State inspectors is especially important, given the number of environmental regulations which are administered by state governments in the United States. Seventy to 80% of environmental inspections are by State and local government.

Permits, whether monitored by the regulated community, reviewed by the regulator, or both, form a principal basis for assessing federal facility compliance with environmental law. They establish often provide the standards or conditions to be monitored for compliance in air, water, and hazardous waste.

Compliance monitoring results must become the basis for budget planning in order to convert the results of monitoring into projects to maintain compliance. As mentioned previously, Executive Order 12088 requires that federal agencies annually submit their plans to meet their pollution control responsibilities to the U.S. EPA for review. OMB Circular No.

A-106 describes the process for developing and maintaining Pollution Abatement Plans. The A-106 circular requires that federal agencies develop plans that assure their facilities meet the standards of federal, state, interstate, and local law and regulations. Such plans are to describe all project costs needed to conform to regulatory requirements. The agency plans are to include milestones for design, construction, and completion of the projects in the Pollution Abatement Plans. The milestones, in turn represent agency commitment to comply with the standards established by statute or regulation, assuming that the identified projects will be funded by the Congress. EPA theoretically reviews and notes each project for adequacy and priority.

The link between compliance monitoring and farsighted budget preparation is essential if government is to meet legal environmental requirements when carrying out other missions. The A-106 process attempts to provide that planning coordination in the U.S. System. For Fiscal Year 1992 federal agencies identified 7,088 projects for abating pollution with a price tag in excess of $5 billion dollars. The A-106 statistics graphically demonstrate the federal government's increased commitment to fighting pollution. The 1992 figures represent an almost ten fold increase in projects and an additional $4 billion in funding over levels in 1988. (Appendix B)

The A-106 system is not without flaws, however. Unfortunately, the A-106 system does not ask for budget data to be presented in the same format that some agencies do cost estimating. This has been a problem for the Department of Energy in particular, where their actual planning data must be converted to an essentially artificial reporting mechanism at the cost of many lost cumulative years of work.

Another problem with the system is requiring EPA to review and assess the data. My OFFE Office Director estimates it would take 60-90 new people to adequately review the other agency submissions. That is potentially more people than on my entire Headquarters staff. These new people would have to be experts in cost estimating, not environmental experts. That fact was driven home when the Administration "scrubbed" the Department of Energy's (DOE) fiscal year 1993 budget for environmental cleanup and waste management.

The DOE budget review was an extraordinary undertaking which consumed 12,500 hours of OMB staff work, 13,400 of Army staff hours, and numerous hours from other agencies participating in the budget review. The item by item budget review involved teams of auditors and engineers inspecting every DOE facility and every environmental budget document. The excruciating review was necessitated by fears that even an almost $5 billion DOE waste cleanup and management budget would be insufficient to meet legal environmental obligations. During the review it became clear that U.S. EPA lacked expertise to evaluate the dollars needed to perform a particular project. Our input was confined to advising on what the environmental law required be done to satisfy the law. How much it cost could be better estimated by DOE, auditors, or construction engineers.

Again, the lesson is to build a federal facilities regulatory role carefully, to rely on networking, and to avoid tasks not suited to a staff specializing in environmental requirements at federal facilities. Finally, the lesson to be relearned in this experience is that in the federal government, the regulated agency will do most of the work needed to meet environmental requirements; e.g. cost-estimating, contracting, or administering the cleanup or workcenter. The regulator assists, oversees, rewards or sanctions.

2.5 Enforcement Options

EPA does not sue other agencies of the Executive Branch to enforce environmental compliance. Neither, can EPA unilaterally order another Executive Branch agency to comply with an administrative order. The other agency must be provided an opportunity to contest the proposed order within the Executive Branch. Unilateral administrative orders have been deemed an unconstitutional interference with the President's authority to manage the Executive Branch of government. This Constitutional limitation does not apply to state or local governments, or citizens. To the extent the sovereign immunity of the federal government has been waived, criminal, civil judicial, and unilateral administrative options are available to states and local government. Citizens can sue to the extent sovereign immunity is waived and citizen suit is authorized by statute. The determination of the scope of the waiver of sovereign immunity varies

from statute to statute. Federal employees are subject to prosecution for criminal violations. Such violations would be referred by EPA to the Department of Justice for prosecution at the federal level.

The foregoing factors subject federal government agencies to civil judicial, administrative, or criminal enforcement, from state or local government, and the citizen, as well as to enforcement from within the Executive Branch. Adding to the enforcement mechanisms are the National Environmental Policy Act (NEPA) and, Section 309 of the Clean Air Act (CAA). The federal government is sensitive to public comment and perspective, in particular, adverse public press.

The consequence is that there is a great deal of environmental enforcement leverage against the federal government; to find the leverage one must look beyond a traditional analysis of administrative, civil judicial, and criminal options. One must factor in the voice of the public, the role of the states, and the extraordinary administrative review mechanisms provided exclusively against the federal government by NEPA and section 309 of the CAA.

2.5.1 NEPA and Section 309 CAA

NEPA differs from other environmental Statutes in that it does not specify compliance standards, but establishes a process by which the federal government is to assess the impact of its actions upon the environment. This succinct four page statute requires that the federal government address adverse environmental impacts which cannot be avoided if federal government actions significantly affect the quality of the human environment. The federal agency must then examine alternatives to the proposed actions and other issues. EPA influences the other federal agency's environmental performance by making comments on the adequacy of matters within EPA's environmental expertise. EPA will also cooperate formally with another agency from the inception of the NEPA evaluation to assist in developing an environmentally acceptable course of action.

The most effective environmental enforcement levers in NEPA are the avenues the Act provides the public. First, the public participates in meetings with the Federal agency to discuss the scope of the proposed federal action, and later, the public comments on the adequacy of the government's analysis of environmental impacts, including alternative solutions and environmental mitigation. Finally, NEPA provides the avenue for the citizen to sue the federal government for procedural errors in complying with NEPA or for substantive failures in the required environment analysis. These NEPA lawsuits, threats of lawsuits, and the attendant adverse publicity are substantial enforcement options that NEPA fosters exclusively against the federal government. (Some states have similar requirements for state actions affecting the environment.)

Section 309 of the CAA provides EPA the availability to review other federal agencies' major actions, including proposed regulations or legislation. Although the review authority is in the Clean Air Act (CAA), EPA's review authority goes beyond impacts on air quality. Section 309 authorizes EPA to consider public health, welfare, and environmental quality. Section 309 was added to the CAA, in 1970 because Congress felt more teeth needed to be added to NEPA. Consequently, under its section 309 authority, EPA can even challenge another agency's decision that their proposed action does not require a NEPA environmental impact statement. EPA publishes its reviews for public consumption and can refer environmentally unsatisfactory projects or projects with insufficient environmental analysis to the President's Council on Environmental Quality (CEQ). In practice, EPA's comments under its section 309 authority receive the great deference owed to avoiding adverse publicity, citizen lawsuit, and/or referral to the President's CEQ.

2.5.2 Citizen Participation

We too often think only of formal enforcement mechanisms when defining the universe of options available to regulatory enforcement agencies. These formal options are more important to U.S. EPA federal facilities enforcement now than in the past, but the role of the public in achieving environmental performance from the federal government remains important. The

emphasis at EPA is in facilitating interactive discussion between the public and the federal government as the preferred option to litigation between the public and the federal government.

EPA's program to stimulate public awareness and participation are still evolving, but includes a national advisory commission to the Administrator of EPA on cleanup of hazardous waste at federal facilities. The EPA participates with the U.S. Department of Energy (DOE) on their Programmatic Environmental Impact Statement for cleanup of their massive environmental waste problems and management of their future waste streams in an environmentally sound way. EPA also sits on two DOE public advisory boards on environmental issues, and participated on DOD's Base Closure Task Force which was also open to the public and had appointed representatives form the public sector.

2.5.3 Cleanup and Compliance Agreements

Among the principal EPA administrative enforcement mechanisms against, federal facilities are cleanup and compliance agreements. Cleanup and compliance agreements between the regulated community and regulators are important means for EPA to link compliance planning and environmental performance. Such agreements implement the law by requiring a series of environmental activities over time. There are two primary environmental laws in the U.S. that govern hazardous waste cleanup and management. These are, CERCLA, or Superfund, which deals with the dangers posed by hazardous waste sites and RCRA, the Resource, Conservation and Recovery Act, which governs (among other things) waste management activities at facilities currently generating waste. One group of these agreements is the Federal Facility Agreements (FFA), pursuant to CERCLA. These are the agreements used to plan cleanup activities at our major hazardous waste sites at federal facilities. As of May 21, 1992, EPA had entered into 103 of these agreements. A second form of agreement is used to bring federal facilities into compliance with the law. These are Federal Facilities Compliance Agreements (FFCA), pursuant to RCRA. FFCAs allow the federal government to institute an orderly and planned process to bring non-compliant facilities into compliance with the law. FFCAs also implement other federal environmental laws. (Appendix C)

In my statement to the United States Senate Committee on Energy and Natural Resources on May 21, 1992, I described the importance of these cleanup and compliance agreements in the following terms.

"The federal government is investing significant resources in addressing environmental cleanup and compliance issues at federal facilities. Cleanup and compliance agreements provide a key framework for determining how and where these resources are to be applied over the long term and are a valuable tool for a number of reasons. First, these agreements provide for accountability to the public. They are enforceable in federal district court by States and citizens, and they allow for some degree of public involvement in and scrutiny of the federal government's environmental management decision-making process. Second, these agreements provide management plans for federal facilities to implement their programs by establishing long-term schedules and milestones. Third, these agreements provide a framework for discussing and setting priorities and determining funding needs. Finally, they clarify the respective roles, authorities, and responsibilities of the parties, thereby promoting greater coordination in implementing the requirements of these agreements. This is particularly important in agreements where states are signatories. Because of the commitment by the federal government that these agreements represent, they are very important to improving the credibility of the federal government with respect to meeting its environmental management responsibilities."

In the previous paragraph I described the importance of the Federal Facilities Compliance Agreement (FFCA) as the customary enforcement response to major violations which require time and the expenditure of capital to achieve compliance with environmental laws and regulations. FFCAs are negotiated between the regulator and non-compliant party. Another negotiated compliance instrument is the consent order. EPA's policy is that consent orders are appropriate when agreements are being negotiated jointly with a State and that State has administrative order authority and are also an option when EPA has order authority itself under statute. Violations of

a consent order can be enforced through the courts whereas violations of FFCA are enforced through dispute resolution within the Administration.

Once EPA discovers an environmental violation, and makes a determination of non-compliance, it then takes its initial enforcement response. The initial enforcement response will vary depending on the type of violation and the record of the violator. Generally, EPA issues a Notice of Violation (NOV), or equivalent notice as the initial written notice in cases where significant violations must be addressed. These NOV's are issued to the Facility Director or Base Commander, and describe the violation and how it was identified. The NOV goes on to state consequences of not meeting the requirement of the law or regulations. The notice will specify dates by which the violator must respond or face issuance of an order or formal escalation of the enforcement action. If the authority under which the NOV is being assessed is a statute authorizing citizens suits, that authority is often cited in the NOV.

In some cases the federal agency will have corrected the violations before receiving the Notice and will provide written certification to that effect. In other cases the violation is corrected in a short time. In such cases the federal agency again will submit a certification to EPA that the violation has been connected with substantiating documentation to demonstrate that the situation has been corrected. In the more serious cases requiring formal response action, EPA will negotiate with the noncompliant activity resulting in either a FFCA or a consent order.

Sometimes negotiations between these parties cannot be resolved. In such cases disputes are resolved by elevation through the bureaucracy in formal dispute resolution, potentially to the Administrator of EPA and possibly to the Office of Management and Budget for resolution. These enforcement procedures are often lengthy and have subjected the Federal government to criticism that it lacks enforcement integrity when it comes to applying environmental law to the government. It also leads to the perception that federal environmental violators are held to lesser standards than the private sector. As noted earlier the need to negotiate enforcement is derived from the Constitutional separation of the three branches of the federal government and the concept of the unitary executive branch. Under this concept, all federal agencies are seen as acting as one entity to carry out the will of the Chief Executive. The executive branch, in turn, being a single entity, cannot take courses of action contradictory to itself.

2.5.4 Criminal Enforcement

Despite all the innovative, pain reducing enforcement options discussed above, sometimes overtly coercive measures are the most appropriate enforcement mechanism. Criminal sanctions are the ultimate coercion. The federal government can't be sent to jail, but federal employees who commit criminal violations of environmental law can be criminally prosecuted. There have been only rare instances when federal employees have criminally violated environmental law. The cause celebre was a criminal case in the late 1980's which led to the conviction of three civilian employees who worked for the U.S. Army at the Aberdeen Proving Ground in Maryland.

The employees were found guilty of criminal violations of RCRA in the performance of their duties developing chemical warfare systems. The appellate court affirmed their criminal convictions, and rejected their argument that they were protected from criminal prosecution by the federal government's sovereign immunity. The court found that the government's sovereign immunity did not extend to criminal activities of individual government employees.

The highly publicized case sent shock waves through many sectors of the federal government. No one incident did more to arouse institutional sensitivity to environmental responsibilities in the federal government than did this criminal case.

2.5.5 State and Local Government Enforcement

State and local enforcement against the federal government is not restrained by the unitary executive concept of the Executive Branch, but is limited by sovereign immunity and the financial and personnel needed to pursue as powerful on entity as a federal agency. Despite

these limitations, state and local government enforcement actions constitute the bulk of regulatory actions against the federal government.

3 RESULTS

What are the results of this holistic -- education to planning/sanctions to rewards -- approach? The federal government's environmental record is improving, and the record allows for room for still further improvement. Rates of compliance with discharge permits under the Clean Water Act improved from 91% to 98% between fiscal year 1989 and 1991. The comparable non-federal rate stood in excess of 98% over the same three years. Rates for compliance with the Clean Air Act improved slightly from fiscal year 1990-1991, and were just shy of similar rates in the non-federal sector. Federal compliance rates were almost the same as non-federal rates under the Safe Drinking Water Act. (Appendix D)

It is the federal government's waste cleanup and hazardous waste management that has gained most attention and most criticism in the U.S. Here the record of improvement is post marked and the room for further improvement is greatest. The Department of Energy alone is asking for $5.5 billion dollars for fiscal year 1993 to cleanup and manage waste. Compliance rates with RCRA have been traditionally lower in the federal sector than in the non-federal sector, particularly in the important sector including facilities the store, treat or dispose of waste (TSD). In fiscal year 1989, federal TSD's were rated as complying with RCRA in 39% of inspections. That rate for federal TSD appears to have increased to 59% by FY 91, with a 63% rate of compliance over the entire federal RCRA spectrum. If these preliminary data are validated, this would be a better compliance rate than that achieved in the non-federal sector. (Appendix D).

4 CONCLUSION

Enforcement of environmental law at federal agencies involves many actors actuating many levers. At U.S. EPA enforcement is part of an integrated management strategy. Accordingly, enforcement isn't always what one normally considers enforcement. It is a continuum from education to incarceration. It stretches from incentives and rewards to sanctions and penalties. Public discussions and press coverage are paired with lawsuits and administrative sanctions as means to influence behavior.

For states, local governments and local citizens sovereign immunity sets the boundaries for formal enforcement, but the pressure of adverse public opinion is not so fenced.

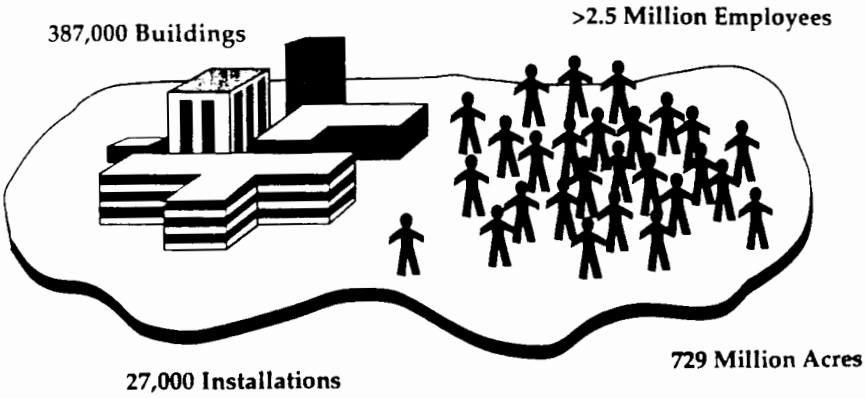
The enforcement of environmental law by the federal government with regard to the federal government can be seen and understood through the concept that the executive branch is one entity. Executive Order 12088 reflects the collective environmental responsibilities all agencies in the Executive Branch. It defines EPA's role to include technical assistance and training, cooperation and enforcement within the federal government. Based on the precepts in Executive Order 12088, the federal facilities environmental enforcement program is aimed at building institutional capacity within the federal government to comply with environmental law. This capacity requires training and technical assistance, both from the regulated federal community and from the EPA. Compliance monitoring becomes a measure of effectiveness of this institutional capacity to comply, and the A-106 budget process becomes the planning tool which converts compliance monitoring into environmental compliance.

In those cases where the system fails to achieve compliance the federal system provides for enforcement consistent with the concept of a single executive branch. This enforcement response relies on negotiated settlements between the regulated community and regulator. These negotiations have been subject to criticism for the failure to treat the federal government with the same enforcement zeal as the private sector. The results of these negotiations are FFCA's and consent orders. These compliance mechanisms put the federal government on compliance schedules to correct environmental problems across the country, and have driven the expenditure of billions of dollars for federal environmental projects.

Federal Facilities Agreements (FFA) are a final, and most important, tool to identify and remediate environmental problems at federal facilities. These agreements set the schedule to cleanup hazardous waste at our federal facilities. FFAs have obligated billions of dollars for environmental cleanup. Taken together, the A-106 program, FFAs, FFCAs, consent orders, provide U.S. federal government the mechanism for programming for and achieving its environmental obligations.

APPENDIX A

The Agency's Federal Facility Challenge Is Substantial



The Agency's Federal Facility Challenge is Substantial

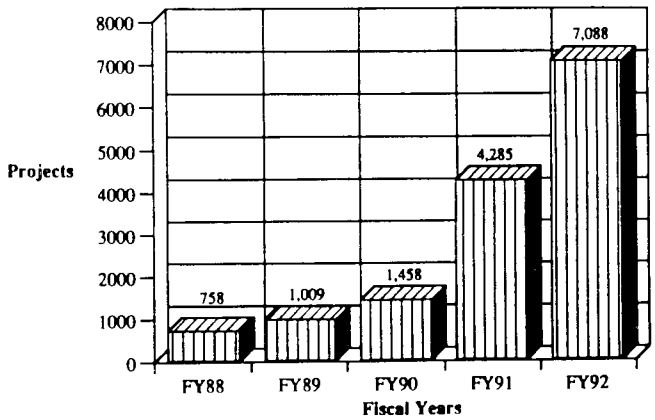
Environmental Program	Number of Regulated Federal Facilities
• RCRA (TSDs Only)	334
(All FF's)	4,396
• SDWA (PWSS)	5,313
• AIR	451
• EPCRA (GOCOs Only)	87
• CWA (NPDES) Major	147
Minor	1,047

OFFICE OF FEDERAL FACILITIES ENFORCEMENT

6/16/92

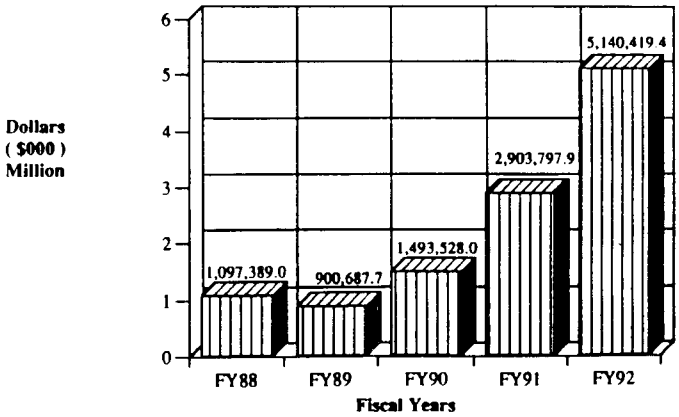
APPENDIX B

Total Number of OMB A-106 Pollution Abatement Projects Proposed by Federal Agencies for FY 1988 – FY 1992



6/19/92

Total Dollars Requested for OMB A-106 Pollution Abatement Projects for FY 1988 – FY 1992 for All Federal Agencies



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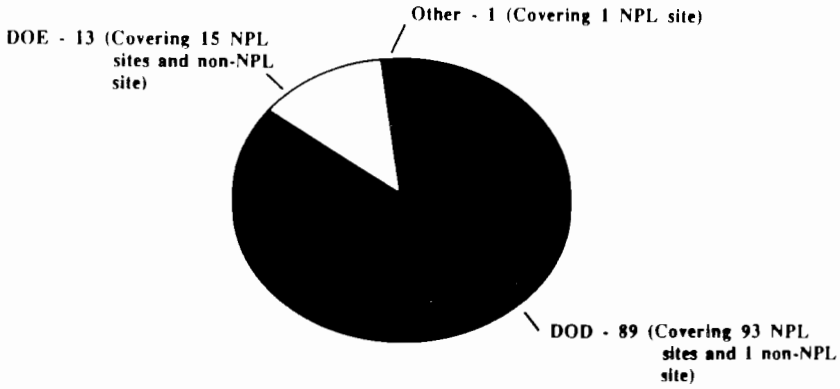
APPENDIX C

FEDERAL FACILITY INTERAGENCY AGREEMENTS (IAG)

Number of Signed IAGs by Agency

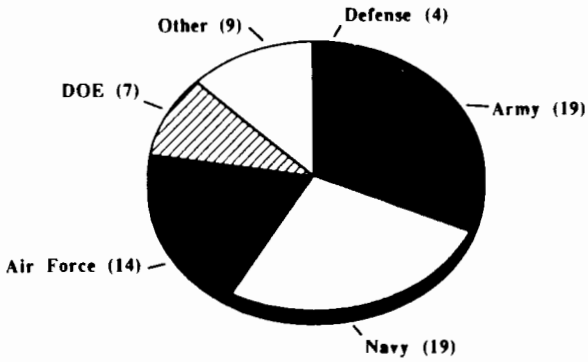


Total = 103 (Covering 109 NPL sites and 2 non-NPL sites)

6/19/92

RCRA FEDERAL FACILITY COMPLIANCE AGREEMENTS

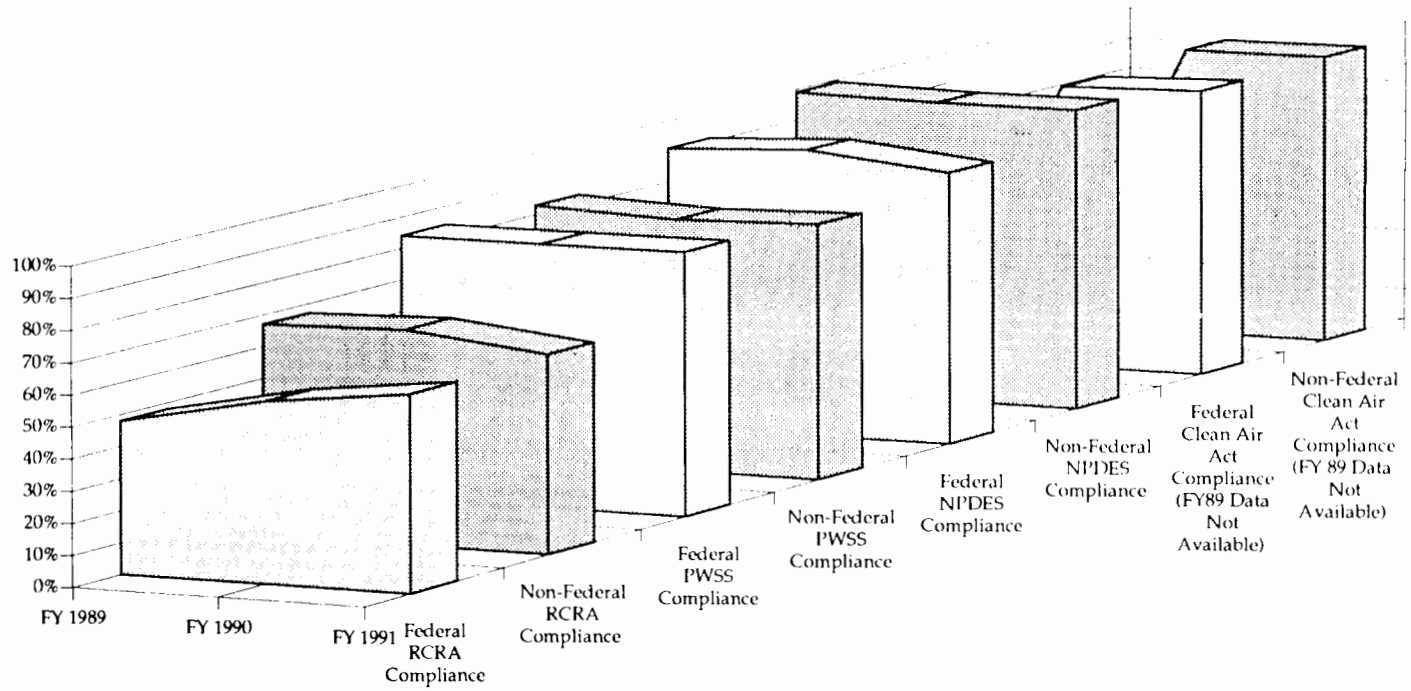
Number of RCRA §3008(a) Agreements by Agency



Total = 73

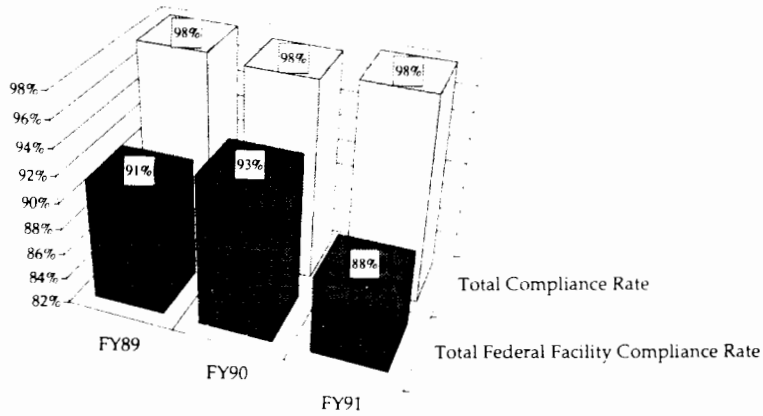
6/19/92

Federal, Non-Federal Compliance Rates Under Non-Superfund Statutes



RCRA = Hazardous Waste Law
PWSS= Safe Drinking Water Law: Public Water Systems
NPDES= Water Discharge Permit Program

NPDES: Compliance Rate Comparison



OE/OFFE
NPDES DATA

30-Jun-92	FY89	FY90	FY91
Total Universe (Major)	7,369	7,131	7,1
Total Inspections	50,100	39,063	42,6
Total Facilities Out of Compliance	733	973	4
Fed Fac Universe (Major)	148	148	1
Total FF Inspections	252	245	6
Total Federal Facilities Out of Compliance	22	16	1
% Universe	2%	2%	2%
% Inspections	1%	1%	1%
% Out of Compliance	3%	2%	3%
Total Compl. Rate	99%	98%	99%
Total FF Compl. Rate	91%	93%	98%

Documentation: NPDES

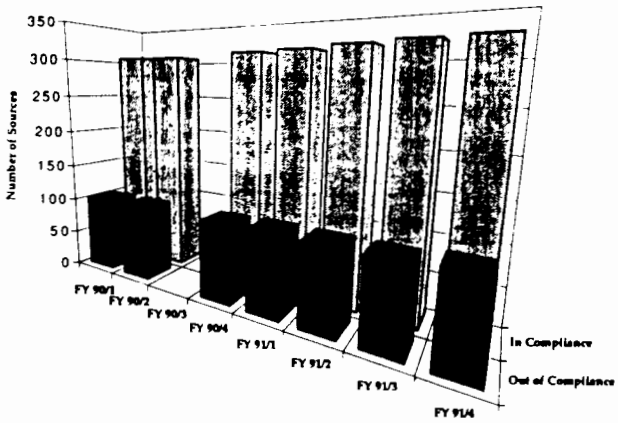
The information for the following chart and graph was taken from PCS on the week of June 22, 1992 by Frank Varisco of the Computer Science Corporation (for FY91 figures). The program contact was Mike Mundel, Office of Water. The information shown for FY89 and FY90 was also taken from PCS but pulled during early April, 1991. The figures listed under violations are actually the number of facilities out of compliance as of the last day of the fourth quarter for each fiscal year.

A. Chart: Comparison of Universe, Inspection and Violation Data for FY89, FY90, and FY91.

B. Graph: Comparison of Total and Federal Facilities Compliance Rates for FY89, FY90, and FY91

PCS= Permit Compliance System, an automated data base

AIR: Historical Compliance Status at Federal Facilities FY90-91



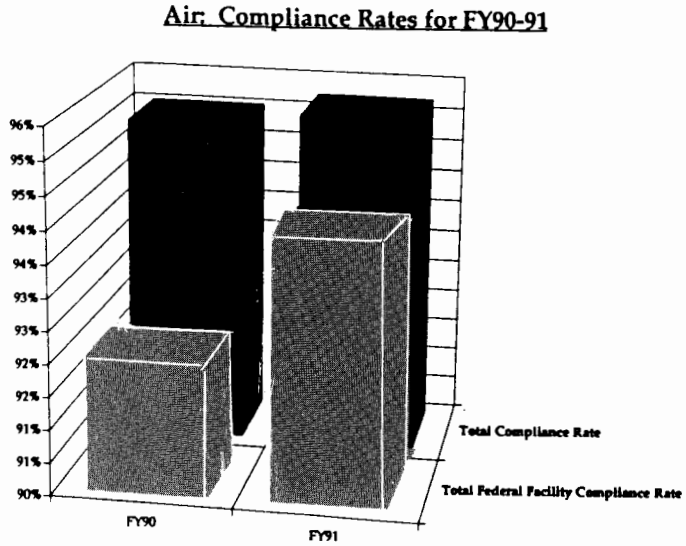
6/30/92

OE/OFFE AIR DATA 30-Jun-92	FY90	FY91	FY92*
Total Universe	36,311	38,077	39,776
Total Inspections	34,667	32,866	* *
Class I Violations	1,572	1,575	* *
Federal Facilities Universe	436	448	451
Federal Facilities Inspections	397	395	* *
Federal Facilities Class I Violations	30	25	* *
% Universe	1.20%	1.18%	1.13%
% Inspections	1.15%	1.20%	-
% Violations	1.91%	1.59%	-
Total Compliance Rate	95.47%	95.21%	-
Federal Facilities Compliance Rate	92.44%	93.67%	-

Note: Compliance rate calculations include areas in compliance, non-compliance, and unknown compliance status.

* FY92 status extends to the end of the third fiscal year quarter.

* * Inspections and violations will not be calculated until the end of fiscal year 1992.



7/1/92

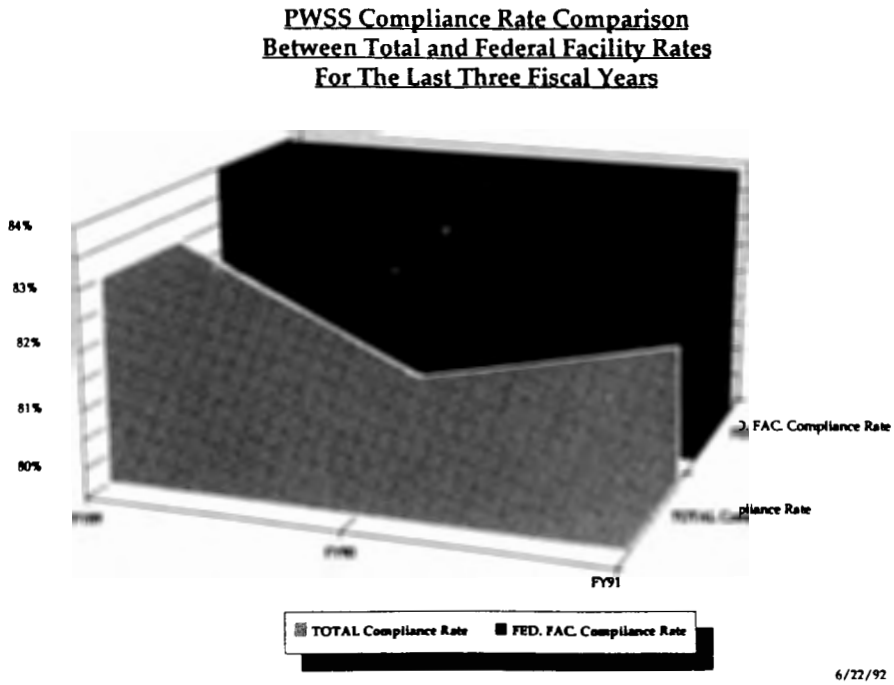
Documentation: AIR

This information for B. and C. below was pulled from the AIRS Facility Subsystem (AFS) on June 22 and June 24, 1992. The milestone reports were developed by Mark Antell of the Stationary Source Compliance Division. FY92 information is represented is the status as of the end of the third quarter–inspections will not be calculated until the end of the fiscal year. Information on the first graph was obtained from a February 25, 1992 Memorandum from Michael H. Shapiro, Deputy Assistant Administrator for the Office of Air and Radiation entitled "Federal Facilities Enforcement Initiatives".

A. Graph: Historical Compliance Status, FY90-91

B. Chart: Comparison of Universe, Inspection and Violation Data for FY89, FY90, and FY91.

C. Graph: Comparison of Total and Federal Facilities Compliance Rates for FY89, FY90, and FY91



Documentation: PWSS

The information for the following chart and graph was obtained from Larry Weiner at PWSS. The system used was the Federal Reporting Data System (FRDS-II) and the pull date for FY91 data was June 10, 1992. For the previous Fiscal Years, the pull date was in March, 1991. The total violations and Federal facilities violations indicate the total number of PWSS' with violations (facility orientation). FY91 Non-Community Total SNCs and Federal Facilities SNCs were, in previous years, a part of Non-Transient, Non-Community categories, now they have been broken out into Non-Community as well.

A. Chart: Comparison of Universe, SNC, Inspection, and Violation Data for FY89, FY90, and FY91. Including:

B. Graph: Comparison of Total and Federal Facilities Compliance Rates for FY89, FY90, and FY91

CIVIL ENFORCEMENT: PAYING FOR THE PAST

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1 INTRODUCTION

In the United States and to a lesser extent in the European Community, environmental law is not only being enforced through public law (compliance with regulations, penalties imposed under criminal law, etc) but also through the civil law. The latter leads to legal actions which result in the following judicial rulings:

- an injunction prohibiting behaviour which threatens the environment;
- an injunction enforcing behaviour which protects the environment;
- a judgement that recovery must be made for any damage to the environment.

Public law enforcement is successful mainly because it demands compliance with environmental standards. Civil law enforcement, because of its association with property rights, is mainly associated with a subject to which companies and private citizens attach prime importance - money: they feel the financial consequences of their environmental behaviour directly in their pockets.

When putting civil law into effect, a clear distinction must be made between environmental damage which has occurred in the past - often a mortgage on which neither interest nor principal appear to have been paid - and the threat of environmental damage in the future. It is obvious that of the two it is remedying inherited pollution which poses the greatest problem. Because the Netherlands has gained more experience in this area than other Western European countries, this will be the topic of this paper.

I shall first give an explanation of the policy based on the principle "the pollutor pays" and how this policy has been implemented. I shall then go into the legal aspects of cost recovery based on court proceedings with regard to tort and unlawful enrichment, as well as the obligations of pollutors and land owners to undertake clean-up operations themselves or to give a guanrantee that clean-up will be carried out. Finally, I shall look at the extent to which this set of instruments can be applied in countries without financial-economic resources.

2 POLICY

The initial reaction to the discovery of an environmental legacy of catastrophic size appears to be the same in every country, namely emphasis on joint responsibility for both the causes of, and the solutions to, the problem. In 1980, in both the United States (after Love Canal) and in the Netherlands (after Lekkerkerk), this resulted in large sums of tax payers' money being spent on cleaning up serious soil contamination. More than ten years later, this is the reaction prevailing in Central and Eastern Europe. It should be noted that the tax burden on business and population is being spread out due to loans from the West. The European Bank for Reconstruction and Development in London has already taken the necessary initiatives.

The attitude that the causes of past environmental damage is a joint responsibility warrants a critical reception. In the West, the damage to the environment is the consequence of industrial processes, which have occurred in the context of a free market economy. As long as there were subsequent (considerable) profits, it was strictly maintained that these were strictly the responsibility of the individual companies. Now that losses are being incurred, one cynically notes that industry, in particular, is suddenly advocating collective solutions.

The reasoning of Western companies surprisingly fits in with the situation in Central and Eastern Europe and also the standpoint of the developing countries at the UNCED congress in June this year. They point to the dreadful conditions at the end of the World War II. There was a miraculous reconstruction of Western European industry which finally brought prosperity to everyone. Everyone should therefore contribute to the clean-up of the accompanying pollution.

These collective solutions mostly conflict with the principle applied to environment policy that the pollutor should pay. Even taxes on industry will often apply to companies which have not themselves contributed to environmental damage. This was the reason why in 1982 the Dutch parliament rejected the government's proposals for taxes on industry for soil contamination and advocated recovering costs on an individual basis.

The expectations for successful cost recovery were anything but high that year. Scientists, lawyers and government officials responded to the government's optimistic attitude with reserve, a gloomy outlook and even sarcastic remarks. In 1983, the Netherlands sued the pollutors in two of the largest clean-up projects (costing approximately $ 50 million each): Shell in the Gouderak case and Philips-Duphar in the Volgermeerpolder case.

I believe the government's willingness to sue systematically has been rather underestimated. From the very beginning, the stubborn misconception has persisted (notably on the side of industry) that there would be no more than a limited number of principal and large-scale legal actions. The purpose of these legal actions was thought merely to be to force a judicial precedent on the issue of who carries responsibility for the pollution legacy. Moreover, there was speculation about the tradition, ascribed to the Dutch government, to decide on tough measures and then not carry them out but make compromises and tolerate infringements.

Later years show a rapid rise in the number of summonses. The Dutch adoption of what is considered to be the American style of taking legal action came as a surpirse to many.

Table 1. Summonses served by the Dutch government

Year	Number	Amount (in million $)
1983	2	46,5
1984	2	47,2
1985	8	17,2
1986	13	6,8
1987	28	12,9
1988	29	23,3
1989	35	52,8
1990	21	142,1
1991	14	19,7
9	154	368,5

No exception has been made for public organisations (municipalities, regional authorities, provinces, ministries) or companies - partly - owned by the government (Dutch Railways, Dutch State Mines etc). They should on the contrary set an example to industry as a whole. In general this is the case. The Ministry of Defence for instance has its own soil clean-up programme worth $ 250 million.

It can be assumed that the increasing number of summmonses as well as the legal judgements in favour of the government are the cause of the changed attitude among polluting companies. One must also bear in mind the negative publicity, the high legal bills and the long period of uncertainty before judgement is finally given. Taking these factors into account, companies (and government) prefer to settle out of court.

A settlement might mean that the clean-up costs already incurred or to be incurred would be paid by the government. Instead of or in conjunction with this, companies can investigate and/or clean up current or abandoned sites at their own expense. There are major advantages for

companies if they commission the project themselves. For instance, it would be possible to link the timing of the remedial measures with that of other operations, renewal projects for example. Moreover, companies would then have direct control over the costs of their own clean-up project.

Industry's change of attitude has tremendously increased voluntary clean-ups, which are arranged between the company concerned and the local authority (for instance petrol stations). The exact number of clean-ups is not known, but it can be assumed that almost 1000 projects were realised by mid-1992. Only part of these were realised with the intervention of the central government (table 2).

Table 2. Settlements with the Dutch government

Year	Number	Amount (in million $)
1983	-	-
1984	2	10,7
1985	5	1,4
1986	6	1,0
1987	8	2,2
1988	7	4,8
1989	11	13,6
1990	9	13,7
1991	7	3,2
9	55	50,6

Negotiations are never held on the basis of "striking a bargain". Nor can alleged doubt about the legal bases of the claim induce the government to deviate from full payment.
Exceptions are made for certain actual conditions. For instance, if more than one pollutor is involved. Furthermore, the ability-to-pay principle is applied. In general, the government is willing to guarantee the continuity of a company by reducing the sum claimed, as long as the company is economically and environmentally valid and as long as the legal dispute ends in recognition of liability.

3 ORGANISATION

The Dutch Minister for the Environment is responsible for recovering costs. He has enlisted the support of the State Attorney in this task. Legal proceedings to recover costs take place in three consecutive stages: finding the perpetrator(s), establishing liability and payment.

At the initial stage, each case of soil contamination where a financial contribution in accordance with the law has been or will be made is subject to fact finding. The facts concerning the perpetration and the actual legal position will mainly come from the relevant local authority, while the facts concerning the soil contamination are dealt with by the province. On the basis of the accumulated facts, together with some additional detective work (for instance in the Trade Register), the State Attorney will advise on the legal procedure.

In cases where costs can be recovered from the beginning, the initiative rests mostly with provincial or local authorities. They negotiate with the pollutor or land-owner about surveys and clean-up operations with full payment of costs for their own account.

The second stage involves establishing liability. This stage directly carries out the advice of the State Attorney or is a consequence of the fact that no or no complete agreement has been reached during the negotiations (and thus government money must be spent). The Minister can request the State Attorney to continue negotiating or to initiate legal proceedings.

The third stage is collecting the money. This stage - if no 100 - percent payment is involved - follows on from the second stage. There therefore needs to be a court ruling or an

acknowledgement of liability. In other words, the liability question must be answered, before payment can be demanded.

Account is taken of the circumstance that the claims on individual companies and people are usually large in relation to their business or household. The judge has authority to mitigate the claim, if awarding full damages would have unacceptable consequences. Moreover, the above-mentioned ability-to-pay principle applies to settlements.

Not only the costs of the state but also those of the provincial and local authority are recovered. If the total costs remain below the threshold amount of the local authority, the Minister is also authorised - and prepared - to recover costs.

4 LIABILITY BASED ON TORT

In contrast to the United States, where strict liability with retroactive effect applies in law, cost recovery in the Netherlands is based on liability in common law, which is primarily based on tort.

Any person who commits a tort against another person which can be imputed to him is obliged to make good the injury suffered by the other person as a consequence. In this case, tort means: a breach of another's rights (for instance, property) and acting or neglecting to act contrary to a legal duty (a permit for instance) or not complying with an unwritten duty of care, without there being justifiable grounds for doing so.

When aswering the question of whether there has been culpable tort, it is particularly important that the matter is judged according to the expertise and the level of knowledge available or should have been available the time about the danger or the hazardous nature of the substances deposited in the environment. The words "should have been available" mean that recognition of the danger or the hazardous nature according to objective norms must be established.

The judicial decisions of the courts and courts of appeal clearly laid down a number of rules

- encountering substances in the environment closely related to the local use of the land legally justifies the assumption that the land user is the pollutor, unless the latter proves otherwise;
- for assessing and tackling the contamination, the Soil Clean-up Guidelines of the Ministry (including the well-known C-values) are the standard criteria;
- bringing hazardous substances into the environment and failing to check their harmlessness is an act of negligence;
- functionaries within a legal entity who are personally to blame for the contamination are held liable for the damage in person;
- being in possession of, or acting in compliance with a government licence or permit does not indemnify one from damage claims;
- moreover, inadequate government supervision does not qualify as a relevant excuse for contamination.

The Supreme Court of the Netherlands has so far given a ruling on one judicial question, namely if the pollutor should have known at the time that he could also be acting unlawfully against the government.

The government considered this a superfluous clause and scrapped this clause in the Act of 1982, but the Supreme Court ruled in 1990 that this was an ambiguous act. The same year, the government had to introduce a bill in parliament to dispose of the ambiguity. This bill was evidently not superfluous because the Supreme Court came to the conclusion this year that the pollutor has only needed to know since 1975 that the government could claim damages from him if he contaminated his industrial site. Without this amendment to the law, 25-per-cent of the clean-up costs would have been non-recoverable on the basis of this judgement.

In 65 of 154 court cases, one or more judicial rulings have been given.

Table 3. Judicial rulings

1986	1987	1988	1989	1990	1991
2	7	11	25	24	27

5 LIABILITY OF THE OWNER

The owner or user of property or limited rights to the property can be liable for any environmental contamination connected with it. Not only his behaviour but also his capacity are determining factors.

5.1 Sometimes the owner is already strictly liable, for example for collapsing buildings and leaking storage tanks (Civil Code, section 6:17, former section 1405).

5.2 Under common law the owner is responsible for his property, which means the owner is obliged to take steps as soon as he notices that his property is in a dangerous state. Admittedly, those steps cannot be enforced by means of an administrative order as in Germany, but the owner is certainly liable for any damage ensuing as a result of his negligence.

5.3 Based on the Soil Clean-up Interim Act, section 21.2, the costs of survey and cean-up may be recovered, if the owner, user or entity with limited rights unlawfully profits from the clean-up. He profits unlawfully if he could have had knowledge of the damage to the environment.
The entity with rights to the property profits if the property acquires a higher re-sale value after clean-up, a higher practical value or offers higher collateral. The extent of profit gained can be determined by taking the difference between the value of the site before and after clean-up. Neither the actual purchase price, nor rent nor interest rates play a role, only valuation by reasonable parties according to objective criteria. If, for example, a polluted parcel was bought for $ 300,000 in the past, the value before the clean-up is assessed at $ 100,000 and the value after clean-up is assessed at $ 500,000, the profit is not $ 200,000 but $ 400,000. Even if the site had been bought for $ 500,000, the profit would still be $ 400,000.

5.4 With transactions with contaminated real estate, the owner must take account of a serious drop in market value as a result of environmental damage. This also applies to transactions as a consequence of expropriation by the government, since the drop in value has an effect on the compensation awarded.
The lower value is not so much due to fears of health hazards as to fewer possibilities for using the ground. There are then the above-mentioned obligations of the owner, the innumerable obligations under public law to perform surveys and undertake protective measures, as well as an obligation to give a clean-up guarantee at the time of the transaction.

5.5 Industry and the government have made far-reaching arrangements for current industrial sites in order to survey and clean up tens of thousands of sites in the next twenty years. The costs will be borne by the business concerned, usually the owner. Defaulters will be confronted by an administrative order to clean up the soil.
The arrangements also contain many facilities. Owners who can demonstrate that they are innocent can request a financial conribution from the government. Companies can deduct the costs of an approved clean-up plan from tax. They can also obtain government-guaranteed credit facilities from the banks.

6 CONCLUSIONS

I have just outlined policy, organisation and legal possibilities for claims for past environmental damage in the Netherlands. Results are achieved on the basis of classic common law rather than on the basis of new tough instruments. The unpaid account from the past is presented systematically and successfully to the original pollutor or to the present owner.

The success of this range of instruments assumes that - as is the case in the West - the majority of the businesses will not get into insurmountable financial difficulties as a result. Even so favourable fiscal and credit arrangements are needed by some of the liable companies. Thought must be given to small family businesses (including metal and woodworkers, laundries, petrol stations). Financial and legal regulations are also necessary for vendors and purchasers of polluted sites.

In my opinion, one should not rush to the conclusion that for this reason the individual instrument will not be successful in Central and Eastern Europe. During the reconstruction of the economy in this part of Europe, where collectivisation is making way for individual responsibility, creative solutions are needed.

There is a strong argument to indemnify new owners completely - for the sake of a free investment climate - from liabilities arising from existing pollution. It is expected that Western companies, particularly American, but to an increasing extent also Western European businesses, will give this top priority in their investment programmes. This was also the major conclusion of the International Conference on Privatisation, Foreign Direct Investment and Environmental Liability in Central and Eastern Europe (Warsaw, 19-21 May 1992).

On the other hand, giving an indemnity must at least be based on payment of the full purchase price without any reduction. In Czechoslovakia and Poland the government has already decided to put (part of) the proceeds towards the direct clean-up costs of the site and future clean-up costs (deposited, for instance, in an escrow account or a fund).

A maximum financial contribution to the clean-up as part of the Offset Requirements or Peer Matching need not cause an insurmountable deterioration of the investment climate. Furthermore Western banks can desire that a certain share of the loan be used to restore the environmental quality. Tax facilities can then also be made for this share of the loan (for instance in the case of Environmental Bonds).

It is very important that old or new owners are prepared to undertake clean-up programmes on their own initiative. This will be a great need for mild tax rates, credit guaranteed by Western states and possibly a direct contribution from the government. Moroever, ample time must be allowed for clean-ups to take place in stages. The financial risk can be reduced by establishing clear clean-up standards and guidelines for enforcement.

PRIVATIZATION AS AN OPPORTUNITY TO ENHANCE COMPLIANCE. POLAND'S PERSPECTIVE

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1 INTRODUCTION

It is a well known fact that Poland, similarly to other post-communist countries of Central and Eastern Europe (CEE), has inherited a heavily polluting industry and seriously degraded environment. In addition, Poland has inherited a weak enforcement system and a tradition of non-compliance of the industry with environmental requirements. In spite of the enactment of a number of new environmental acts, the basic environmental law still come from the communist time: the 1980 environmental act, the 1974 water law, the 1982 act on the protection of agricultural and forest lands. Its is needless to say that the laws are not always tuned to new political and economic circumstances. There was, however, a very important legislative development in 1991: it was the enactment of an Act on State Inspectorate for Environmental Protection which empowered the Inspectorate with broad competencies. From the past experience we have learned a lesson that without a firm enforcement of environmental requirements in relation to all economic subjects we will not manage to achieve goals of sustainable development.

2 ESTABLISHING A NATIONAL ENVIRONMENTAL POLICY

Nearly three years ago Poland initiated fundamental changes in her political and economic system. Essential elements of this process include on the one hand privatization of state-owned enterprises, the main source of the environmental degradation, on the other,implementation of the policy of sustainable development. The concept sustainable development found its expression in the National Environmental Policy (NEP) which was adopted by the Government in 1990 and approved by the Parliament in 1991. The main goal of the new policy is "the attainment of a balance between social, economic, technical and environmental conditions in the process of development". According to the NEP, privatization processes will be used for the improvement of the environment degraded by the industry and mandatory environmental audits will be introduced; the audits will enable to make calculations of costs of the recovery of the environment and they will be essential for negotiation of the price of a privatized enterprise.

The NEP emphasized that; "One of the basic principles of the new environmental policy should be the principle of law-abidingness. This under our conditions means the necessity of reconstruction of the legal system and the system of enforcement in such a way that no oppcrtunities will exist for circumvention of the law for reasons of 'circumstances outside one's control, public interest or impossibility'".

3 THE PRIVATIZATION OF STATE-OWNED ENTERPRISES

The privatization of the today's dimension was launched by the 1990 Act on the Privatization of the State-Owned Enterprises. Strangely enough, the then widely discussed National Environmental Policy was completely ignored by law makers dealing with privatization. Therefore the 1990 privatization act is void of any express and direct environmental considerations. It soon turned out to be one of the essential defects of the privatization law. This shortcoming of the privatization process has been criticized by the western investor as not allowing him to make sensible business calculations. This shortcoming was quite early realized by the Ministry of Environment which offered the Ministry of Privatization appropriate cooperation and

assistance in introduction of necessary changes in the privatization practices, so as to take into account interests of the environment. Unfortunately the level of the cooperation is still low and the pace of progress is too slow, however lastly the situation is changing quickly for better. It is worthy to note that a growing number of environmental NGO's is getting alerted by the unfriendly treatment of the environment in the privatization process.

4 PRIVATIZATION BY COMMERCIALISATION AND LIQUIDATION

The privatization in Poland as based on the above mentioned 1990 privatization act and the 1981 Act on State-owned enterprises, has two main tracts: commercialisation and liquidation. Related to the latter one is bankruptcy (based on the 1934 decree) which is growing in number and which is likely to cause a lot of serious environmental problems if not addressed timely. The privatization through liquidation is the most popular way of privatization. Till the end of March, 1992, the Minister of Privatization had approved altogether 1127 motions for liquidation: 492 were based on the 1990 act and 635 on the 1981 act. There have been some 40 cases of the privatization through commercialisation.

4.1 Commercialisation

Commercialisation as regulated by the 1990 act consists of two stages. First a State-owned enterprise is transformed into a joint stock company or limited liability company of the State Treasury. Second, its shares are disposed to third party (or parties. The second stage constitutes the genuine privatization. In accordance with Article 8 of the 1990 privatization act a commercialized company assumes all rights and duties of the privatized state enterprise,including those deriving from administrative decisions. This is so called general succession. As a rule, the liabilities of the company are transferred on a new owner. This general succession covers liabilities resulting from the past contaminations as well as obligations to comply with binding environmental requirements. It covers also permits and licenses issued for the enterprise before its commercialisation. They are automatically transferred on the new owner. In the 1974 water law there is a provision (Article 29) which provides for the same automaticism: " Legal successors of an enterprise assume rights and obligations contained in permits".

There is, however, a possibility to negotiate allocation of environmental liabilities between the investor and the State Treasury. As a matter of facts this occurs when a State Treasury company is purchased by western investors. For the time being, the Polish investor ignores consciously or not consciously potential consequences which may arise from the automatic transfer of environmental liabilities.

A State-owned enterprise, usually small or medium size, can be privatized through liquidation. This can be accomplished on the basis of the above mentioned 1990 privatization act or the 1981 act on state-owned enterprises. The term "liquidation" as used in this context is unclear and confusing. On the one hand, "liquidation" can be understood as a termination of a State-owned enterprise as a legal person on the other, the term denotes disappearance of the enterprise as an economic entity. Under the 1990 act, the reason for liquidation is change of ownership (privatization), while under the 1981 act, the reason for liquidation is its bad economic situation. Article 37 of the 1990 privatization act provides that a state-owned enterprise may be converted to private hands in one of the three ways: 1. the liquidated enterprise or integrated parts of its assets may be sold; 2. the enterprise or integrated parts of its assets can be contributed to a company; 3. the enterprise or integrated parts of its assets can be let (lease).

As already mentioned, there are no specific provisions in the 1990 act or the 1981 act (as amended) regulating a question of environmental liabilities for a new owner or the State Treasury. Therefore the question of liabilities has to be considered on the ground of the 1964 civil code. As a rule, the alienation of a state-owned enterprise or integrated parts of its assets entails joint and several liability of the purchaser and the alienator (State Treasury). Generally, the purchaser is liable to the limit of the price he paid for the enterprise. He is liable for everything that he knew at the moment of purchase or that he should have known, unless he is able to prove his due

diligence behaviour. In this context environmental audit can play an important role as a fulfilment of the due diligence requirements. Unfortunately, it is virtually, it is virtually not performed in this path of privatisation.

4.2 Liquidation

In the privatisation through liquidation are almost exclusively involved Polish investors, mainly management and workers of the liquidated enterprise. They spend usually all their savings for a purchase or lease of their enterprise and therefore they lack necessary money for pro-environmental investments. It seems that this category of enterprises will have many problems with environmental compliance. This question cannot be left unaddressed any longer.

5 INCORPORATION OF ENVIRONMENTAL ISSUES

Although there are no express or direct environmental provisions in the privatization law, it is possible, basing on a broad interpretation of the 1990 privatization act, to introduce at least some of them. It presupposes however, that environmental issues are considered as equally important as fiscal ones. According to Article 5 § 2 of the 1990 act, a motion for transformation of a State-owned enterprise into a State Treasury company should include economic and financial assessment. Since environmental liabilities, particulary those concerned with past contamination, could be very extensive, it seems logic that the assessment should include also environmental assessment. The latter one could be done on the basis of environmental audit. Therefore it seems justified to consider the invoked article as a basis of environmental audit. Another opportunity to introduce environmental audit stems from the wording of Article 20 § 1 of the privatization act: "Before offering shares to third parties the Minister of Privatization shall order that an economic and financial study be prepared for the purpose of asset valuation as well as establishing whether the implementation of organizational, economic or technical changes is required". Next article of the act (21) constitutes a good ground for requirement of pro-environmental restructuring: "The Minister of Privatization can make it condition that company shares are only offered to third parties after the implementation of changes, as referred to in Article 20 § 1". Unfortunately there are no similar provisions applicable to privatization through liquidation. It seems that the only way to include environmental considerations to liquidation (without amendment of the 1990 privatization act) is enactment of a special decree of the Council of Ministers which is envisioned in Article 25 of the 1981 act.

6 ENVIRONMENTAL AUDITING

As mentioned above, it was the western investor who raised questions concerned environmental issues in the process of privatization in Poland. Similarly to the US or West European practices he expected that environmental liabilities would be discussed on the basis of environmental audit. To meet his expectations, the environmental audit began to be performed. The audits, commissioned by the Ministry of Privatisation, are now performed also for the purpose of the so called sectoral privatization (in this plan, enterprises within the same industrial sector are grouped and processed together for privatization). The main aim of the audits is to identify an extent of soil and ground water contamination caused by a privatized State-owned enterprise. The scope of the audits is limited to the area of the enterprise; there are no off-site examinations. Results of the audits constitute part of privatization contracts and as such are confidential. Neither the Ministry of Environment nor any local environmental authorities or environmental NGOs are involved in or have any access to the audits or its results. This situation, as likely to cause public suspicion, is much criticized and it should be changed as soon as possible.

7 RESPONSIBILITIES FOR CLEAN-UP

Environmental audit helps to establish costs of cleanup and control technology. Based on the information disclosed by an audit, the seller and the purchaser can negotiate who will hear responsibility for these costs (as a matter of fact, the State Treasury cannot give to the investor unlimited environmental liability). Such questions are solved on an ad hoc basis. As a rule, adjustments are made in the purchase price to reflect the purchaser's assumption of responsibility for cleanup. Sometimes the government accepts that a portion of the purchase price should be reserved in an escrow account for environmental cleanup. The purchaser agrees to commence environmental cleanup within an agreed upon time and the government agrees to share the costs and expenses of remediation. In such transactions cleanup standards are establish by referencing Western European Standards(1).

It seems that from the perspective of the Polish environmental law, the above policy deserved few words of criticism. First of all, there is no legal vacuum in the field of restoration of contaminated soil. The 1980 environmental act provides in its Article 13 that the polluted soil should be restored to a proper state, however, it is not defined what is meant by the "Proper state". But it is the competence of the local government (wojewoda) to define a level and way of fulfilment of the restoration obligation (Article 82 of the 1980 act). In this context, it is strange that the local government is not involved in negotiations with potential investors and his prerogatives are not respected. A similar situation exists under the 1982 act on the protection of the agricultural and forest lands (article 29 and article 32). In this case, the competent organ to decide on cleanup is situated belongs to the local selfgovernment. One could imagine that disregard for the competencies of the local authorities could cause some problems, mainly if the authorities have varying perceptions of the cleanup. This disregard for the local authorities sends also a bad message to the local population. The new owner should care of his good-neighbour image from the very beginning. There are no doubts, however, that cleanup standards for Poland should be worked out and adopted soon.

8 MANDATORY AUDITING IN THE PRIVATIZATION PROCESS

The Ministry of Environment, almost from the very beginning of the privatization in Poland, voiced the opinion that environmental audit should be a key element of this process. The Ministry believes that within the range of actual needs it should be obligatory both for the commercial and liquidation privatization. In order to overcome shortages of the privatization law, the Ministry of Environment initiated last year a vigorous collaboration with the Ministry of Privatization. Unfortunately, such developments as the elections to the Parliament, change of the Government suspended the cooperation which was resumed again in April this year. In May a joint working group was set up and a formal agreement on cooperation between the two ministries was signed. The main task of the group is to introduce environmental audit into the privatization process as a mandatory requirement, work out rules for allocation of environmental liabilities between the new owner and the State Treasury and establish unit for solution of pending environmental problems emerging in the privatization process. The unit will be composed of some 10 people., highly skilled professionals (audit managers, permit managers, environmental lawyers). The unit will be involved in negotiating of individual privatization contracts concerned with allocation of liabilities for past contaminations and pro-ecological restructuring. It will closely collaborate with the Ministry of Environment, mainly State Inspectorate for Environmental Protection, and local environmental authorities.

9 ENFORCING ENVIRONMENTAL REQUIREMENTS

The State Inspectorate for Environmental Protection will play a vital role in compliance enforcement. The Inspectorate outlined its enforcement program at the Warsaw Conference on Privatisation, Foreign Direct Investment and Liability in Central and Eastern Europe (19-21 May,

1992). It was stated there that the special attention of the agency would be paid to the heaviest polluters which are both on the national and local lists (respectively 80 and 800 enterprises). However, the State Inspectorate, being aware of the backwardness of some branches of the industry will take a balanced approach in specifying environmental requirements for privatized companies. In many cases environmental requirements will be a matter of negotiations with potential investors and the agreed upon environmental commitments will be monitored and enforced by the State Inspectorate. Before a consent for a particular stage of ownership transformation is given, detailed environmental requirements will be put forward. For instance: 1. the plants operating on the basis of outdated technology, with contaminated sites endangering human health, will be required to undertake a cleanup action within a given time. It will be possible to negotiate with an enterprise a sharing of costs of remediation of less dangerous contamination if the enterprise modernize its technology to the required level; 2. the businesses overexploiting natural resources will be required to cut their production to the level guarantying a reasonable exploitation. As in the above case, it will be possible to negotiate deadlines of remediation actions; 3. the plants which are legally qualified for closure (lack of necessary permits or licenses) will be given a chance to meet the required standards. The deadlines for them will be determined as technically feasible and comparable to similar ones in the EEC; 4. the plants whose economic hardship is caused, among others, by the imposed penalty for violation of environmental requirements will be eligible for abatement or inclusion of the penalty to the cost of pollution control investment which will eliminate the reason for the penalty.

10 ENFORCEABILITY

One of the fundamental principles of the successful compliance policy is to ensure that the environmental requirements themselves are enforceable. It is a well known fact that too strict requirements cause delays and delays undermine the credibility of an enforcement program.

Very stringent requirements were introduced by the 1990 Regulation on the protection of air against pollution. The regulation provides for ambient quality standards which are to be met by 1998 and which are stricter than most of those adopted by the OECD countries. The regulation is addressed to conventional power plants. For the purpose of the regulation the plants are categorized into 3 groups: new plants (C), existing-modernized plants (B) and existing non-modernized plants (A). However, the intention of the 1990 regulation is to apply the strictest standards of emission of SO2, NOx and particles is to new boilers only. Others are expected to meet lower standards. The government is aware that in many locations they cannot be met within the next decade or so. The question is what policy is adopted by the government to ensure that the regulation is complied with?

Two key issues have to emphasized in this context. First, a legal basis is needed for regional environmental authorities (wojewoda) to issue realistically enforceable permits for plants operating in non-attainment regions. Second, the permits should include compliance schedules indicating enforceable emission reduction targets of, say 5%-10%, for one or two years intervals, so that regional authorities could monitor improvements and take immediate actions in case of failure. It would be a mistake to merely set reduction targets for distant dates and wait until the polluter comply without a possibility of an administrative action if no progress is demonstrated. On the other hand, there are no technical possibilities for gradual improvements in many plants; a typical abatement investment results in a substantial emission reduction, but only after several years of a "non-improvement" phase. Thus, in order to make sure that gradual progress does occur, as well as to offer financial incentives to those environmental champions who reduce their emissions more than required, the government see emissions trading programs as a necessary element of any viable regional or sectoral restructuring process. A special provision on marketable permits is included in the draft environmental protection act. In the energy sector marketable permits should help large power plants to meet their permit requirements by abating low-stack, dispersed emission sources rather than their ones. One pilot project in Upper Silesia region is already under way.

11 CONCLUSIONS

For many years charges for economic use of the environment (intake of water, discharge of used water, emissions to air, disposal of waste, cutting trees and bushes) were very low and did not constitute an important factor in economic calculations. This situation changed radically last year when a new Regulation on charges for the economic use of the environment was adopted. Certain charges for the most menacing pollutants increased so radically that they endangered economic existence of some industrial sectors (for instance pulp and paper industry), not to say their ability to invest in pollution control equipment. Therefore the reasonableness of the regulation and the industrial policy of the Ministry of Environment became a topic of discussion in Parliament (2). A representative of the Ministry confirmed that the charges imposed by the regulation had not been preceded with cost/benefit analysis. He blamed partly the industry for the situation, because of its weak response and too general comments on the draft regulation. Nevertheless, he added that the Ministry of Environment is ready to amend the regulation so as to make it more feasible for the industry.

The experience with the regulation seems to be a very important lesson both for the industry and the Ministry of Environment. The industry has learned that environmental regulations could decide about their very existence and therefore they should actively participate in legislative process, on the other hand, the Ministry has learned that too tough regulations could bring quite a different environmental result than anticipated.

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THE POLISH PROHIBITION OF WASTE IMPORT

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1 INTRODUCTORY REMARKS

When in the second half of the 1970s a draft of the Polish Environmental Act was prepared, the significance of waste problem was not fully recognized. That was probably a cause that the legislative norms dealing with waste included into the Environmental Protection and Management Act passed on 31 January 1980 were rather curt. They indicated only some protective directions, signaled main obligations being a burden on producers of waste, obligated local bodies to create conditions being friendly to protection against waste, introduced fees for gathering waste according to the law and fines for gathering waste contrary to the law as well as determinated the responsibility for petty offences consisting in violation of obligations connected with ensuring requirements of environmental protection against waste or economically useless raw materials, products or used package.

The provisions of the Environmental Protection Act have been extended in the executive order pased by the Council of Ministers on 30 September 1980 on environmental protection against waste and other pollution as well as on maintaining cleaness and order in towns and villages. Furthemore they have been extended too in the executive orders on fees and fines in the environmental protection.

In the end of the 1980s Poland grew an object of interest of many firms from West Europe and the United States as a place where waste might be put down. After disclosure of some transactions which had as a result many barrels of old paints, varnish and other chemicals, leather waste, etc. brought into the Polish territory, the legislative counteraction was iniciated in order to stop such activities. On 27 April 1989 the amendment to the Environmental Protection Law was passed (it came into force on 1 July 1989). As regards waste import two new norms have been introduced:

- into section 8 of chapter II "Environmental protection against waste and other pollution" new Article 53a has been added: *Article 53a. Import of waste from abroad is prohibited*
- into chapter III "Penal provisions and fines for violation of protective requirements" new *Article 108a has been added: Article 108a. 1. Who imports waste from abroad to Poland, he is a subject to penalty of imprisonment up to 3 years and fine. 2. In a case of minor weight the perpetrator is a subject to penalty of imprisonment up to one year, restriction of liberty or fine.*

In such a way the Polish legislator has adopted the most restrictive position, compatibile besides with the Basel Convention signed on 22 March 1989 on the Control of Transboundary Movement of Hazardous Wastes and their Disposal, having introduced an absolute prohibition of importing any waste. This prohibition cannot be repealed and its violation has beeb always recognizing as a crime.

There are some doubts and difficulties as well as some unfavourable effects from the point of view of environmental protection, which have been caused by the introducing such an absolute prohibition.

2 DOCTRINAL AND PRACTICAL INTERPRETATION OF, ARTICLES 53A AND 108A OF THE ENVIRONMENTAL PROTECTION ACT

The absolute prohibition of waste import treats all matters which according to the Polish law are recognized as wastes. The legal definition of waste is written in Article 3 point of the Environmental Protection Act which as "**waste**" requires to understand *used objects and solid*

substances as well as liquid substances not recognized as sewage, originating in connection with human existence or economic activities, useless in place or time in which they had originated and ardous to the environment.

Regarding to this definition it ought to be underlined that the Environmental Protection Act does not use a term "hazardous wastes". The Polish law knows classification of wastes distinguishing three categories of special wastes:

- waste menacing contamination (it means waste containing radioactive substances),
- waste menacing infection (it means waste containing pathogenic microorganisms),
- waste specially harmful to the environment (it means waste containing substances recognized by the Minister for Health and Social Care as poisons or harmful means).

Attachment of waste to any above mentioned category of special waste results essential consequences according to the internal law. For example the way of disposal and neutralization of special waste have to be agreed with the regional governor. Nevertheless this question has no significance for Articles 53a and 108a of the Environmental Protection Law. The prohibition of waste import encompasses all waste and not only special ones belonging to categories involved.

Therefore the only condition required by prohibition of waste import is that an object or a substance is waste in general according to Article 3 point 5 of the Environmental Protection Act.,

The last provisions gives a substantial definition of waste based on two criteria: uselessness and ardousness to the environment. The term "uselessness" has been related to the time or place when or where waste had been originated. The Polish legislator has used an alternative. It means that used object or substance cannot be recognized as waste only in such a case if it is useful simultaneuosly in place and time where and when waste had been produced. As a consequence an object or a substance being useless in a country where it had been produced but useful in Poland ought to be recognized as waste in the meaning of the Polish law.

The second criterion is of normative character. Article 3 point 6 of the Environmental Protection Act determines that "ardousness to the environment" is to be understood as physical phenomena or staes impending life or making nuisance, especially noise, vibration, air pollution or pollution by waste. Such a definition requires to suppose every useless substance imported to Poland in order to store it - as waste because the necessity of storage decides about its ardousness. As regards objects or substances imported in order to economic use or liqidation it must be said that their ardousness to the environment results of air pollution (for example after combustion) or producing derivative wastes.

The State Inspectorate for Environmental Protection accepts the following interpretation: As waste is to be recognized every object (substance) useless abroad that should be in Poland landfilled or liquidated (in the last case because of air pollution). On the other hand some kinds of objects (substances) useless abroad may be imported to be used in Poland if their using does not result air pollution, sewage or derivative wastes. When it will be stated that such an object (a substance) useful to economic use requires for example previous cleaning away of tramp elements (a for example mettalic scrap polluted by oil), it means it must be treated as waste. The State Inspectorate for Environmental Protection (subordinated to the Minister for Environmental Protection, Natural Resources and Forestry) coordinates using of these principles. On 29 August 1990 an agreement between the Chief Inspector For Environmental Protection, the Chief Sanitary Inspector, the Chief of Custom Office and the Chief of Boundary Guard was signed. The agreement deals with protection of state territory against waste import. Its essence consists in such a procedure that if some doubts regarding to the character of goods disclosed on border have been occured, the Customs Service or the Boundary Guard are obliged to inform the State Inspectorate for Environmental Protection. If necessary, the State Inspectorate for Environmental Protection together with the State Sanitary Inspectorate make suitable activities in order to clear the case. However it was not possible to organize on borders special laboratories because of high costs.

In October 1990 all boundary passages were provided with portable dosimeters serving to the control of goods in direction of their posible contents of radioactive substances.

The other fields of activity of the State Inspectorate for Environmental Protection are controls over economis subjects and giving opinions about likely import of goods which might be

admitted as waste. The State Inspectorate for Environmental Protection cooperates also with environmental services from other countries.

Above mentioned solutions, being worked out in practice, have been confirmed in legislation. Thus the Act passed on 12 October 1990 on the Boundary Guard included into tasks of this guard prevention of transportation accros the border wastes and harmful chemicals as well as radioactive substances. This Act empowers officers of the Boundary Guard to stop and to move back to the sender harmful radioactive substances, chemicals and biological means from the state border.

The Act passed on 20 July 1991 on the State Inspectorate for Environmental Protection included into its tasks changing informations with the Customs Offices and the Boundary Guard about import of goods prohibited or restricted in consideration of environmental protection as well as cooperation with the Boundary Guard in border zones.

The outlined here activities give some effects. According to informations presented in the report by the Chief Inspector for Environmental Protection in the period from July 1989 to January 1991 Poland was offered for gathering or liquidating at least 17,622,000 tons of useless wastes. In the most cases it was be possible to prevent these transactions.

It looks differently with a question as regards import of useful wastes. In the same period from July 1989 to January 1991 projects for processing wastes provided together 767,000 tons of waste. From this amount 61,000 tons of wastes were imported and processed, among them 24,000 tons of zinciferous wastes and 22,000 tons of waste paper.

Very rigorous approach of the Polish legislator causes some difficulties in practice. An example may be import of waste paper which according to the opinion of the State Inspectorate for Environmental Protection in some cases may be advisable from the point of view of environmental protection in Poland.

It is so because some kinds of waste paper are not generated in Poland, therefore the only one alternative would be extension of cutting trees in forests. The State Inspectorate for Environmental Protection gives sometimes permissions on import of waste paper. It is however not to deny that conformity of such permissions with the law is very doubtful because waste paper is legally recognized as waste. More over, opponents to such sollution pointed out that import of waste paper in some manner relieved Polish administrative bodies from a duty to organize in a proper way buying waste paper in our country. Actually it is so because the question of buying waste paper has not found a proper solution and looks very week.

There was another example famous in 1991 import of waste sulfite liquor from Norway. In the Polish provisions dealing with fees for waste there is a position "waste sulfite liquor". Fees for such wastes are ones of the biggest therefore waste sulfite liquor was recognized in an implied way as a harmful waste. Meanwhile the Minister for Environmental Protection, Natural Resources and Forestry has written to the Chief of Customs Office that waste sulfite liquor was not waste because it had been produced in the Polish works but in insufficient amount, therefore for many years it had been supplemented by import from Czechoslovakia. Thus. according to the minister's opinion, when waste sulfite liquor is used completely, in 100 percent, it cannot be treated as waste but rather as raw material indispensable for production. Concomitently the minister points out that waste sulfite liquor is an toxic substance and if it cannot be used as a whole, it will acquire characteristics of waste.

On the other hand some experts say that the copper works Glogow and Legnica using waste sulfite liquor employ out-dated technology. As a result all waste sulfite liquor (and also sulphur and other harmful substances) gives into air. If these works had been modernized, the import of waste sulfite liquor would be unnecessary.

The discussion seems to be rather hopeless. Waste used in economy does not stop to be a waste. On the other hand if using waste sulfite liquor is necessary in Polish conditions of technology, it must be imported, but legal provisions ought to be formulated in a different way.

The Polish public opinion is very sensitive to waste import from abroad. According to the famous report of the Greenpeace (by Andreas Bernstorff and Jim Puckett) from October 1990, at least 46,000 tons of wastes were imported into Poland. I would like to remember that every case of waste import has to be treated as a crime. There are no informations about criminal proceedins which would be ended with indictment. In newspaper we can find some figures about several

proceeding on Article 108a of the Environmental Protection Act in course, but there are no data available about courts decisions in such cases.

Sensivity of the public opinion to waste import gets sometimes grotesque forms. Two years ago there was a famous case of 500 barrels of toxic wastes brought from abroad. In summer they had to be destroyed on a military testing ground. One night a group about 200 persons, inhabitants from neighbouring villages, animated by the chief official of a group of villages, made an irruption into that testing ground and destroyed facilities serving to neutralization of dangerous wastes. As a result neutralization was impossible. The Minister for Environmental Protection, Natural Resources and Forestry in published in newspaper opinion has said it had been a result of obscurantism and ignorance. Probably it was a right opinion but an action of people did not arise in emptiness. The people in Poland have no indispensable knowledge about wastes. Besides warming up atmosphere on the waste import has brought to such flagrancy.

3 LEGISLATIVE PROJECTS

Poland wants to ratify the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal; this question is decided and the ratification should be done in the nearest time. New provisions about waste import must be conformed to the convention.

In March 1992 a new version of the Waste Act Draft was prepared by the Ministry for Environmental Protection, Natural Resources and Forestry. The designers give up a substantial definition of waste and define it *as all matters or movable goods originated as a result of human existence or economic activity which are disposed or whose disposal is intended or should be made.*

An essential supplement to this definition will be separation of dangerous waste, it means such wastes which because of their source, chemical or biological composition may be imminent over human life or health or natural environment. A register of dangerous wastes should be defined by an executive order passed by the Minister for Environmental Protection, Natural Resources and Forestry in agreement with the Ministers for Health and Social Care, for Industry and Trade, for Agriculture and Food Economy.

Chapter 4 of the draft is entitled "International Circulation of Waste". It is consisted with six articles, which should be named in full contents:

Article 22. An international circulation of waste is to be understood as waste import from abroad into the Polish territory, transport of wastes originated from abroad through the Polish territory as well as waste export abroad from the Polish territory.

Article 23. International circulation of dangerous waste is prohibited in realation with states which are not parties of Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal signed in Basel on 22 March 1989.

Article 24.

1. *Import of dangerous wastes from abroad in prohibited.*
2. *Import of other wastes is admissible only with consent passed by the Chief Inspector for Environmental Protection.*
3. *The consent defined in part 2 may be passed if:*
   1) *waste is destinated for economic use,*
   2) *there are not in the country available wastes suitable for equivalent economic use or there are ones in insufficient amount,*
   3) *economic use of imported waste will not provoke menace for natural environment and especially will not contribute to enlargement waste gathered on earth surface.*
4. *The Chief Inspector for Environmental Protection may condition giving consent to:*
   1) *presentation by the importer of waste an opinion of appointed expert about compliance with conditions defined in part 3,*

2) securing in time defined in consent return to the exporter such a part of imported waste which in economic use has not been completely processed.

Article 25.

1. *Export of dangerous waste is admissible exclusively with consent passed by the Chief Inspector for Environmental Protection.*
2. *The consent defined in part 1 may be given under condition that it would be obtained consents of proper agencies from importing state and transiting states.*
3. *The provisions of parts 1 and 2 are respectively used in a case of transit dangerous waste through the Polish territory.*

Article 26.

The Minister for Environmental Protection, Natural Resources and Forestry may by an executive order define that provisions of Article 23 should be respectively used to circulation with other waste.

Article 27.

The Minister for Environmental Protection, Natural Resources and Forestry will define pattern of consents used in internal and international circulation of waste.

In connection with such provisions there are projected - different than to day penal provisions. They will be defined as follows:

Article 29.

Who imports dangerous wastes from abroad, he is a subject to penalty of imprisonment up to 5 years.

Article 30.

1. *Who without a demanded permission imports from abroad wastes other than dangerous or exports them abroad, he is a subject to penalty of imprisonment up to 3 years.*
2. *In the case of minor weight the perpetrator is a subject to penalty of imprisonment up to one year, restriction of liberty or a fine.*

SOME INFORMATION ON ENFORCEMENT CONCERNING SOLID AND HAZARDOUS WASTES DISPOSAL IN CZECHOSLOVAKIA

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The theme of discussion includes Solid and Hazardous Wastes and the actual situation in compliance with and enforcement of current laws and regulations. To understand this problem better, however, it would be useful to compare it with other environmental media, especially with the problem of water and air protection.

CSFR with its 15 million inhabitants comprises of two republics and has been governed by 100 district councils representing the state government institutions. Even in this single fact there is something new: only four years ago there existed the two-level system of management under which the concept and special programs were being operated by relatively well equipped regional government institutions of 10 regions (7 of them belonging to the Czech and 3 to the Slovak republic). The Public Health Service, for example, has maintained its two-level system of management of regional laboratories including the possibility of appealing against the decision of a district public health officer to the regional public health officer. The district councils have established their own environmental departments analogous to those in larger cities. Even the small communities have their officials commissioned with executing the environmental policy. Their number and qualification considerably differs between particular districts. In former seats of regional authorities there were sometimes some 20 university or high school graduated professionals on water management (it was the strongest group), air pollution, preservation of natural resources and forests and on wastes disposal management.

Due to the geographical reasons (our inland situation determines that with the exception of Danube practically all the rivers spring in CSFR and flow out of the country) as well as due to the historical reasons considerable adjustments of the river flows and to some extend also certain wastewater treatment covering wastewaters from towns and industry were necessary as early as at the beginning of this century. The Hydrological Institute of T. G. Masaryk employing more than a hundred professionals existed before the Second World War already. Together with the work of the Hydrometeorological Institute and on the large administrative areas operating government authorities this structure provided for a relatively highly qualified system of management. In the 50ies, the laws and regulations on water preservation were passed and the headquarters and regional inspectorates for state watermanagement inspection were established. Also established were the headquarters for water basins management. In that time, this concept was a very progressive one. This type of organization was known even in the U.S.A., for example, where it was being made use of by several interstate watermanagement agencies responsible for managing river basins in case rivers were forming borders between the U. S. states and it was expected to be more efficient to manage particular river basins as a whole.

Due to the reckless development of heavy industry pushed ahead in accordance with a doubtful idea that Czechoslovakia should have become a "steel heart of the socialist camp" and consequently due to a considerable neglect and transfer of water preservation among minor, second-class problems an overall deterioration of water quality in rivers and basins occurred and in a number of locations even serious damage and threat to the underground waters appeared (Bratislava, Ostrava). Even among the hydrologists the situation prevailed that constructors of dams were clearly being given preference. These often undervalued and even suppressed the endeavours of their collegues-hydrologists aiming at water treatment etc. This may apply, for example, to the first objections against Gabçíkovo-Nagymaros waterworks at the beginning of 60ies.

I am mentioning this history in details on purpose because it demonstrates the fact that even under the relatively qualified state authorities, with the existing strict watertreatment standards and subject to the objections of non-governmental organizations (NGO), that is, the fishermen and environmental activists (however, they were not allowed to protest too loudly) practically all our rivers have become polluted up to the degree III and IV. Industries as well as

the socialist agricultural enterprises easily got the exception status when they were not complying with the requirements to build wastewater treatment plants. Those were, anyway, financed both mostly and insuficiently from state budget.

Probably even more undesirable situation applied to the air pollution. In this area, not earlier than in the 70ies it was decided that the Ministry of Forest and Water Management (that preferred to operate rather as a production department) should have been responsible also for air pollution monitoring and control).

Denial of the basic principles of heat and electricity using in industry and to a certain extent even in agriculture and towns (e.g. poorly isolated prefabricated blocks of flats and infrastructures) resulted in the fact that together with the former GDR we find ourselves not only at the leading position in per capita energy consumption but also among the countries suffering the worst air pollution. At the same time, the concentration of energy production based on burning coal containing sulfur in the area of Podkru¿noho-í in Northern Bohemia contributed considerably to a critical state of pollution in these particular areas. As even in big cities there is a high number of places heated by coal containing 2-3% of sulfur and only in 1993 the cars belonging to firms and not having catalyzers will not be allowed to the centres of Praha and Karlovy Vary, **air pollution** has been regarded to be our most serious environmental problem.

In 1971 the first attempts were made to prepare **The Law on wastes** under the condition that the Ministry of Forest and Waster Management would have been equipped appropriately for the control, inspection and management of wastes. The original draft of this law was returned back to the authors in a way that the top ministerial officials of that time did not dare to try to push it ahead any more. Officially it was due to formal reasons but most probably it was refused because the reasoned statement in fact openly put down requirements for large investments into the higher-quality sanitary landfills, incinerators, etc. Only more than ten years later (when all the Western European countries had updated their laws on wastes once or twice already) another round of negotiations started concerning the possibility of passing the law. Anyway, the suggested idea was rather simplifying the problem reducing it first of all to the possibility of obtaining significant source of raw materials. The law was even intended to concern just the secondary raw materials and thus it was the Ministry of Industries that was commissioned to prepare its draft.

In that time the **efforts of NGO** played a considerable role which was a predecessor of currently existing **Czechoslovak Society for Environment**, whose Working Group for Wastes elaborated and later on, during the two national conferences, also approved the basic principles for the Waste Disposal Act. This draft including the provisions on prevention, reuse and disposal of wastes as well as on some principles concerning state government authorities was accepted to a considerable extent. But the complex solution came not before the drafts were prepared after the 1989 revolution having been submitted by the Ministry of Environment and Federal Committee for Environment and supported by the Slovak Commission for Environment that was established later on. It is necessary to mention within this introductory part that in the period of 1990-92 the environmental responsibilities in Czechoslovakia have been devided among the Federal Committee for Environment (which is responsible - besides the responsibility for nuclear power stations - for various national programs and for the whole agenda of international relations and cooperation), the Czech Ministry of Environment and the Slovak Commission for Environment, the latter two being the executive authorities. The Czech Department governs, with the help of its 12 territorial divisions (regional offices) 70 district councils, e.g their environmental departments.

To show how compliance and enforcement should be realized I am mentioning **The Principles of Current legislation**. The **Act** No. 238 of 22th May 1991 (1) **on Wastes** includes definition of basic terms. It includes the principles similar to those of EC and to a considerable extent even to those valid in Austria and Germany (definition of wastes, hazardous wastes, waste-producer, or waste disposal).

The Basic Provision maintains that both the legal and natural persons are obliged to prevent waste generation and create conditions for its reuse and processing. Legal and natural persons are obliged to carry out these activities solely within the facilities that have been designed for this purpose.

Any import of waste to be disposed of on the territory of the Czech and Slovak Federative Republic is prohibited. The ban does not apply provided the following conditions are fulfilled at the same time:

- The waste import is based on a contract on providing the Czechoslovak partner with a verified and already realized disposal technology meeting the world scientific and technical standards.
- All the imported waste will be disposed of while simultaneously the total amount or the degree of harmfulness of similar wastes produced in our country will be reduced.
- Import, transport and storage of such wastes are allowed only if approved by the Czech Ministry of Environment or analogous authority in the Slovak Republic. The above mentioned authorities have established special commissions for considering such imports.

Similarly, there is a ban on exporting hazardous wastes without a written consent of both importing and transit countries.

The duties of legal and natural persons related to waste management have been set by the law on the level of republics (2) that defines the **role of state administration in waste management** and has been the main tool for compliance and enforcement.

The highest authority within the state administration responsible for environmental issues is the **Ministry of Environment** of the Czech Republic that reserves the right of final supervision as for the elaboration of the waste disposal programs on the republic level and the right to decide about the import, export or transit of wastes.

The **Czech** (Slovak in the Slovak Republic) **Environmental Inspection** (3) has been monitoring compliance with the legal regulations concerning wastes management both within other bodies of state administration and legal and natural persons involved in waste management activities. The inspection can **impose penalties** in accordance with the Act on Wastes that may range between 10 000 and 300 000 crowns (that is, 100 times a 1991 average salary) in case the waste generator :

- does not elaborate a consistent waste management scheme
- fails to secure a source-sorted waste collection
- does not ensure waste utilization or disposal of the wastes
- does not keep records on wastes in accordance with a special code of conduct (4)
- does not label properly the products or their covers from the point of view of their recycling or elimination.

The penalty from 20 000 up to 500 000 crowns can be charged in case the generator:

- does not allow access of checking authorities into the processing (storing) facilities or does not submit the necessary waste management documentation or even does not provide true and full information
- performs waste collection, purchase, processing or elimination without being licenced for that or violates the provisions of the licence, acts without having the approved rules of conduct or handles the wastes outside the approved facilities.

The penalty from 100 000 up to 10 million crowns can be charged when the most serious violations of law occur, especially in these cases:

- the regulations on waste import and export has been violated
- the hazardous wastes are not collected and stored separately or are not manipulated in accordance with the special regulations of the Public Health Office concerning protection of public health
- the waste generator does not fulfill the obligation to notify and report to the authorities and does not keep records on liquidation of hazardous wastes
- hazardous waste is being transported without permission or the transporter violates the permission
- the waste generator does not respect the order of state authorities charging him/her with the duty to eliminate, in exceptionally urging cases and in the interest of the public, the wastes in his/her own facility capable of doing so.

The Inspection, at the same time, sets **terms and conditions** for bringing the violator to compliance. The Inspections offer a qualified help to the local (district) authorities.

The inspection is managed from the Headquarters and has 8 regional inspectorates in the Czech Republic. Similarly, an analogous Headquarters of regional inspectorates is being established in the Slovak Republic. In the Czech Republic, the Wastes Division employs 49 persons including administration personnel.

Inspection is thus the main authority responsible for enforcement. It came into being in 1991 when it was officially established. In the mean time it has still been gathering knowledge being derived especially from the many years of experience of the Division for Water Protection and the Division for Air Protection.

The main state administration authorities responsible for compliance are the **district councils**.

The districts in Czechoslovakia have an average 150 000 inhabitants. According to the Federal Act on Wastes and legislation of the republics on the state administration the District Council

a) approves waste management programs according to the Decree No. 401/91 (5)
b) grants **approval** to
- facilities engaged in wastes elimination
- hazardous wastes disposal
- issuing the Operating Instructions for waste processing
- business in waste handling

In case of not meeting the conditions or violating the regulations the District Council may withdraw its approval.

c) makes **statements** on
- establishing waste elimination facilities
- waste management plants construction and building of other waste management related facilities already in the stage of the building scheme or its change (e.g. the first step of project documentation)
- changes in waste management related technological processes

d) **controls** compliance with the decisions aimed at suppressing the law-violating activities
e) **is authorized to use enforcement measures** as well as to set terms for bringing the violator to compliance, it is also authorized to **stop the activities** contributing to waste generation if there was a danger of a serious environmental damage. The District Council is also authorized to **charge penalties** thus being authorized to practise enforcement. The district councils represent at the same time a sort of concept-making bodies as they are commissioned to work out waste management programs on the district level based on the programs of producers and communities.

At this point it is necessary to mention that the claims determined by the given duties (and it is far not the full account of them) highly exceed the possibilities of managing them given the existing number and qualification of the district councils' personnel.

Extremely important from the point of view of compliance is elaboration of the **waste management programs** of producers who may be legal and natural persons conducting waste generating activities as well as communities on the territory of which the municipal waste is being generated. According to the Decree of the Czech National Council No. 401/91 of 16th August 1991 (5) each producer generating more than 100 tons of wastes a year or more than 50 kilograms of hazardous wastes is obliged to elaborate, until 31st August 1992, a program for the period of 1992-97. According to the above mentioned Decree and in compliance with the Federal Act on Wastes and the Republic Act on State Administration, this document should be approved by the district council. In accordance with the general rules of conduct this should be as any other application settled within 30 days. As it is clear from the following text, this task is most probably not viable within the given term and strictly for all the waste generators of whom may be even several thousands. That is why the exception is possible and the authorities may not necessarily be obliged to comply with the given term. Such a situation is mentioned also in the Case Study 2 in Principles of Environmental enforcement. It concerns the situation when the Dutch regional

authorities were not able to ensure, due to the lack of qualified personnel, that all the wrecker yards detected would be inspected properly and in time and thus they had to accommodate the original plan while hiring more personnel for meeting their goals.

The purpose of the legislative institutions is to ensure through the programs elaboration

- the basic identification data on the generator or community
- analytical data concerning wastes quantity and quality including the data on their generation
- elaboration of the proposals for reducing, utilization and elimination of wastes
- bringing under control all the relevant documentation related to the executive authorities.

The **main identification data** include:

for the generators: Characteristics of the the enterprise and its establishments (subsidiaries) which is far from being easy to gather, for example, in case of the state railways, the networks of bus transportation, the distributors of motor fuels, etc. Characteristics of the production processes including determination of basic problems of waste management.

for communities: Characteristics of the community, its representatives and responsible persons, basic information on the community, data on the quantity and structure of wastes generated, information on dump sites, the list of legal and natural persons engaged in waste disposal within the community, information on preserved, green belts and other environmental interests.

The **main analytical data** include:

for the generators: the review of production sites where the wastes are being generated, may be utilized or eliminated. The wastes generated have to be, and that is very much demanding, sorted according to the **Catalogue and categorization of wastes** (6) which is practically identical as for the sorting and codes of wastes with the categorization used in Germany - e.g. the LAGA Catalogue - or with the catalogue used in Austria. In an enterprise where several tens of waste types are being generated and a proper evidence including weighting of the wastes has not yet been executed it is rather a difficult issue. Determination of some waste types is subject to the interpretation - that means the responsible personnel must decide whether some waste will be regarded as hazardous (the records about this type of waste will have to be kept if more than 50 kilograms of it a year are being generated) or just as others (in this case recordkeeping is obligatory when more than 100 tons of such a waste is being generated). As some confusions still exist, new amendments to categorization including instructions on interpretation are being worked out currently. The **Terminological Norm** (7) is going to be an important aid. It will present definitions of the most frequent terms including their English, German, Russian and French equivalents. This norm should be elaborated during this year if the plan is met.

Contemporary experience suggests that responsible determination of quantity (in case of wastes and sludge it is necessary to know the contents of water) will be a difficult task for many enterprises and even more demanding will be the control of correctness of these data. During the single detailed statistical investigation in 1987 (the wastes having been sorted into approximately 400 groups according to their composition) various misunderstandings, mistakes and even concealments of some types of wastes occurred. These occurred despite the then Federal Statistical Bureau and State Planning Commission had issued a very detailed and voluminous instruction at that occasion (cca. 60-page guidelines).

for communities, the data and conditions concerning collecting communal wastes are given.

Survey of wastes concerns the originating, utilized and temporary and finally deposited wastes sorted into the groups of hazardous, special (e.g. important from the point of view of national economy) and others. It also concerns some special points on handling these wastes, security conditions and fire protection. The survey further concerns the data on **non-waste generating technologies and recycling** in production and description of facilities for elimination of wastes run by the producers (dump sites, incinerators, waste sorting and processing facilities including the technical parameters and quantities of processed wastes of their own or of other

subjects). The survey and characteristics of **not already used dump sites** is given on this place, too, mentioning the quantities and characteristics of deposited wastes and the state of reclamation or rescue of these old dump sites. All this should provide the first systematic review of this type of contaminated sites. Also mentioned are the costs of processing and elimination of wastes as well as the information on self-monitoring reports of the enterprises and on how these data are being submitted to the competent state authorities in accordance with the government Decree on Waste Reporting (4).

The **designing part** represents the purpose of the program itself and includes the organizational and technological measures aimed at reducing waste generation, its sorting, material and energy utilization and waste liquidation. It is also necessary to keep in mind the supposed changes in production especially with regard to the attenuation programs the purpose of which is to close down out-dated facilities and gradually change over to the more effective and energy and material less demanding types of production with lower waste generation.

The **documentary part** includes copies of decisions of the competent authorities concerning waste management programs of the generators, records on prospective controls, etc. The generator must add the statement of the respective local council (including his/her own analysis and objections in case he/she does not agree with the opinion of the local council). Included within the documentary part will be later on also the approval of the respective local council as well as information on possible changes incorporated into the program on the basis of demands of the respective authority.

Generally it is supposed that the district (local) authorities can decide about granting the producers **special conditions, e.g relaxation** about handling the wastes for a certain period of time necessary for accommodation to the new conditions if these are not able, in time the program is being elaborated, to fulfill the duties set by the law. Such relaxations may apply only for a period up to five years since the Act on Wastes has entered into effect, e.g until 1996.

The waste management program for the district is being constructed differently. Besides the introductory part describing the characteristic features of the district, the **survey** of wastes generated, utilized and eliminated has been included in the analytical part using the system of sorting wastes into the groups of special, hazardous, other and communal wastes which is in accordance with the catalogue and categorization of wastes.

The survey of waste generators is also included as well as the characteristics of the wastes generated and the survey of communities generating communal wastes including the analysis of how they are being handled. Similarly, the survey of waste collecting and processing facilities within the district is referred to including their technical and operational parameters. The not yet resolved problems are also mentioned on this place (the problems of capacity, efficiency, financing, administration, etc.).

The **designing part** will contain organizational and investment plans, expected and documented designs for structural changes aimed at reducing waste generation and the program of rescue and reclamation of dump sites. Measures to coordinate activities with other districts will be of special importance.

As an appendix the map should be enclosed on a scale
1:30 000 with the most significant waste generators, facilities, protective zones, etc introduced into this map. Enclosed in the appendix should be also the approved programs of waste generators as well as the programs elaborated for the communities.

Extremely intensive preliminary and committed negotiations are expected to take place during the last quarter of this year. The opinion was voiced several times that the programs should be just taken over by the district councils and approved gradually during the following period of time according to the urgency given, for instance, by the state of preparations of facilities construction, by the necessity to negotiate on common facilities or in case of a serious clash of interests.

Public interest groups, NGO and citizens are expected to comment on the problem and submit important suggestions as everybody has the right to get acquainted with the district programs.

It is clear that at this juncture the complex solution of the task is necessary because it is not possible to set any chronological priorities and solve the problems step by step. The task

involves both all the waste generating units and the state administration authorities on the district and local levels as well as a number of officials at the Czech Ministry (or the Slovak Commission) of Environment. Frequent contacts take place currently between the competent officials. The district officials could, for example, meet at a two and a half day long seminar organized by the Czech Ministry of Environment in cooperation with the Czech Society for Environment.

A number of impulses and ideas sprang out from the negotiations, as for example:

- in case of some **enterprises with a great number of subsidiaries (or workshops)** located over the whole territory of the country it would be useful to negotiate the program in advance on the level of the Wastes Division of the Ministry of Environment. After this division makes a statement on the respective problem, the program will be submitted to the district council in the place where the seat of the headquarters is located (this may apply to the railways, the regional bus transportation services, distribution of motor fuels, etc.). Nevertheless, the statement of the local council where particular units are located will be necessary. According to the Decree No. 401 the district council is obliged to cooperate on elaborating its own district program with waste generators situated on its territory in order to ensure the feedback necessary for obtaining the statement and approval of the district authorities, even though it may include some additional demands.
- **first entrepreneurial associations** are emerging capable of working out programs applying to multiple communities and sometimes also to multiple production subjects and aiming at resolution at the same time also the problems of funding the construction of the necessary facilities. This concerns especially separated salvage aiming at utilizing at least the basic components of communal wastes (glass, paper, kitchen wastes, etc.) and constructing the dump sites for the rest of the wastes. At the same time the hazardous components that may become a part of communal wastes should be brought under control (e.g.bacteries, fluorescent tubes, remains of chemicals, etc.) The first associations are going to be financed on the share holding principle by the firms and communities aware of the fact that national resources for funding (see information on the Fund for Environment later on) will be highly limited.
- the **general concept** of hazardous wastes disposal on the whole-republic scale is missing urgently. This will be a part of the Waste Sector Study that is to be worked out within the framework of the project funded by CEC firms Environmental Management (GB), CESL (Portugal) and Dagh Watson (It) until May 1993. The absence of such a concept resulted in the attempts to push through, for instance, a great number of incinerators of hazardous wastes attached to various large industrial enterprises. Anyway, this was fundamentally lacking the complex attitude that would consider addressing such related problems like a complete service aimed at collecting and transporting hazardous wastes on regional level. Foreign experience supports a small number of large-capacity facilities providing services like collection and transportation of hazardous wastes even from a great distance because the share of the cost of transportation represents just a small part of the overall cost. The customers prefer complex services, e.g. the take over of any and all of the hazardous wastes. The problem is that the way of funding of such large facilities has not yet been resolved (this concerns the assessed 50-100 mil. US $) which is expected to be one of the main tasks of the above mentioned study to solve.
- the **NIMBY syndrome** (Not In My Back Yard) occurs. A number of plans of larger-scale and efficient regional solutions (e.g. processing of old accumulators, processing and deposition of residual wastes coming from the galvanic sludge, incinerating of liquid combustible wastes in cement factories, etc.) are being refused by the local and often even district authorities with the explanation that the authorities are not going to approve "imports of wastes from other sites". This considerably reduces especially the possibilities to use favourable hydrological conditions for building larger regional dump sites equipped according to the European standards as they are applied even within the Decree of the Czech government on the Details Concerning Wastes Handling (9).
- the evaluation of investment plans representing as a whole most probably less efficient solutions than would be represented by the more efficient **larger regional facilities**, has not yet been coped with sufficiently as for the methods are concerned. The investor can

always more easily obtain financial resources ranging from 10 to 30 mil. crowns for building a smaller incinerator of local industrial wastes. Such a facility can usually be easily approved as it intends to burn only the wastes generated within the walls of the particular enterprise or if need be the communal "wastes generated within our own community or district". Anyway, a number of these incinerators do not refine the products of combustion well enough, their chimneys are low and thus it is sure that their specific environmental pollution burden per a ton of combusted waste must be heavier than it would be in case of combusting wastes on the large scale given the permanently controled facilities.

- from the practical point of view it is not yet clear to what extent will the district and local ministerial divisions create, and thus be contributing to the realization of, **regional waste management concepts**. In the mean time the idea prevails that they should be preferably engaged in administrative activities, e.g. negotiating the supposed programs, control activities, etc.

The waste management programs in general represent a highly demanding and complex activity that should within a short period of time, some 2-3 years, considerably reduce the scale of our 15-20 years of backwardness behind the legislation and practice regarded as a standard in the developed countries and contribute considerably to the efficiency of compliance and enforcement. The fact that all the officials and scientists engaged in inquiring into the problems of waste handling have been currently engaged in developing, negotiating and control of waste management programs contributes a lot to the increase in their practical knowledge and insight into the problem.

I am going to mention some other legislative regulations exercising an influence upon compliance and enforcement. **The Details on Wastes Handling** are of a great practical importance (10). They set the principles for handling hazardous wastes, they bring about categorization of wastes for dumping through determination of classes of extracts predetermining the dump sites construction as well as the principles of sealing the dump grounds or reclamation. Originally, the prerequisits concerning covers ought to have been set but this problem will be solved separately.

The Details will be followed by an even more detailed, recommended Czech and Slovak State Norm on Wastes Dumping.

The possibility of making use of the support of the Czech Environmental Fund established under the legislation passed by the Czech National Council is very important for compliance (10). Similarly, there exists also the Slovak Environmental Fund. The Fund has been a special organization with its own statute, with its director appointed by the Ministry of Environment and with its advisory board - the Council of the Fund - appointed by the minister, too.

In accordance with a special instruction, it is possible to provide means, on the request and in compliance with the statute of the Fund, to support measures aimed at environmental protection and improvement, especially aimed at

- supporting investment and non-investment activities
- supporting research, development, production of and implementing appropriate technologies
- supporting monitoring environmental media and (ecological) processes
- repayments of installments and interests of loans provided by the Fund (which is a matter typically of non-interest-bearing loans and subsidies)
- supporting educational activities and dissemination of environmental information

Unfortunately, the Fund itself is not that rich. As for the year 1992 some 25 billion crowns were designed mostly for unfinished wastewater treatment plants and air pollution control projects. The share assigned to waste handling projects will be at the disposal not earlier than in 1993 when there will be penalties and fees paid for waste deposits flowing in on the receiving side of the Fund (see later). The Fund has its source of income in:

- fees paid for discharging pollutants into the air and waters
- fees paid for water taking and extracting minerals
- penalties for violating the regulations and measures of environmental protection

- state subsidies, shares from tax revenues, contributions from individuals and organizations

Related to the activities of the Fund is the **Act on Fees for Waste Deposition** (11). This Act passed by the Czech National Council aims at enforcing restrictions on land annexations and the risk of polluting ground waters. The fees are scaled according to the harmfulness of the wastes and according to the dumpsite's compliance with the required standards set by the legislative regulations, as it is seen in the following table. Some relaxation of the assessed fees has been anticipated for a three year's period and after that the fees will have to be paid in a full scale.

Table 1

groups of dumpsites	fee rate I crowns/t	fee rate II crowns/t 1992	1993	1994
1. soils and deads	0	1	3	6
2. other wastes (except No.1)	10	25	70	140
3. solid communal wastes	20	20	70	210
4. special wastes except hazardous and those under No.3.	40	110	320	640
5. hazardous wastes	250	3000	4000	5000

The fee rate I. applies to the dumpsites secured in accordance with the government Decree on the Details of Waste Handling. The fee rate II. applies to the dumpsite not secured in compliance with this regulation. If the insufficiencies are not removed (given the relaxation during 1992 and 1993) the full fee will be paid. The classification has been carried out according to the Catalogue and categorization of wastes (6).

The fees for dumping were subject to strong objections especially by the large power stations that were demanding separate categorization for the powerplant flue ash maintaining that it concerned nearly an inert material and that the cost increased by the fees would be reflected in the consumer prices for electricity.

Conditions for Wastehandling Entrepreneurial Activities and **Conditions for Hazardous Wastes Handling** are determined by even more detailed regulations. Immediately after the legislation was passed the permits were being granted (too generously) for the entrepreneurial activities, especially for those concerning collecting and processing secondary raw materials. Nowadays the claims are much more strict and both examinations and controls of qualification for these activities are necessitated. The **License for Audit Elaboration and Environmental Impact Assessment** has been granted separately. The elaboration of EIA has been imposed by the Environmental Act in case of particular types of investment projects and changes in technologies where a more serious impact on the environmental media could be expected. The more detailed documentation concerning EIA has been defined in the Czech Act (13) and even more details could be found in the Instruction and Explanation published in the Bulletin and Newsletter of the Czech Ministry of Environment. In these journals one can find further details, description of experiences and an explanation of the environmental legislation ammendments. As for the wastes specialization, **The Wastes** magazine is being issued as an official magazine partly funded by the Ministries of Environment. Its first and second volumes are, too, dedicated to a considerable extent to the information on legislative regulations and experience with their implementation. There is also another **independent magazine We and the Wastes** published by the private company Universa with the professional support of the Czech

Society for Environment. Besides various ideas and critical stimuli concerning regulations on waste management it contains also practical technical information about activities in Czechoslovakia and reports from various conferences and seminars abroad. A number of privatized and **newly originated** firms carry on, on the business basis, an educational activity organizing seminars and courses. The seminars of TOCOEN (Toxic Organic Components in the Environment) are on a highly professional level. They are organized by the University of T. G. Masaryk in Brno and oriented especially at the problem of toxic substances like PCB, PCDD, etc.

Various NGO active in the waste management problems contribute to enforcement, too. For example, the Union of Nature Protectors commissioned one of its organizations to be engaged in the activities aimed at liquidation of old dumpsites. The organization called The Children of Earth struggled against the use of PET bottles endeavouring to make the producers recycle these covers. The producer accepted the challenge and promised to process all the clean bottles under the condition they would be collected and brought to the respective facilities. The problem now stands that the collection, shredding and expedition to the producer are not reasonably resolved. Similar activities in the field of waste handling are being currently prepared by the Czech organization of Greenpeace. Systematic educational activities and dissemination of information including establishing the feedback to the Ministries of Environment (the Federal and the Czech ones) are carried out by the **Czechoslovak Society for Environment.** It has been organizing qualification courses for the state administration officials and officers as well as for the employees in various industries, it organizes also specialized seminars and conferences (this year, for example, the conferences on waste dumping, complex environmental protection and control in some industrial aglomerations and on solidification of wastes took place). Furthermore, through a number of activities aimed at increasing the qualification of educationalists and other cultural workers it has been endeavouring - within the framework of the **Ecomenius** foundation - to train the trainers. The Czechoslovak Society for Environment wants to make a contribution to pushing through of an important program aimed at "Reducing redundant waste generation through reasonable management of packaging" the solving of which it would like to ensure through the work of an interdisciplinary team consisting of the members of the society. The problem of covers has not yet been assigned to a special ministerial department. Unfortunately, financial resources to support these programs are very poor and limited and funding of this project is uncertain. The Czechoslovak Society for Environment endeavours even to overcome the undesirable effects of the NIMBY syndrome. It participates in the environmental information network, takes part in the council of the Green Circle, etc.

From the **technical point of view** , this all concerns the following topical tasks:

1. Reducing excessive dangerous wastes generation including their elimination while using, to a considerable extent, existing facilities as
   - standard-quality landfills belonging to the preparation plants of uranium industries processing especially inorganic wastes containing toxic metals (being used in previous recycling of economically extractable shares and solidification of wastes from galvanizing facilities)
   - cement factories where combustion is possible including the use of heat originating while incinerating a number of types of liquid wastes and alternative fuels obtained from wastes on the basis of swarf saturated by the hydrocarbon remnants,
     sludge, etc. In the longer term also crushed plastics and waste paper will be included.

2. Clarifying the meaning of "reasonable" when considering number and level of equipments of regional incinerators or centers for elimination of dangerous wastes. As it was already mentioned, many enterprises are interested in building incinerators to eliminate their wastes and (for a good price) also undesirable wastes in their regions.

3. Adopting and implementing schemes of separate collection of the main components of communal wastes within the communities of various magnitude including technologies aimed at miscelaneous utilization of worse-quality paper and kitchen wastes suitable for

compost production, plastics processing into the products for sale or interproducts, catching non-ferrous metals and aluminium from the metals collected, etc.

4. Managing reconstructions of inconvenient dumpsites as practically all the operated dumpsites are leaking and changing them into acceptable landfills. Technical and organizational managing of a great number of cases when auditing is necessary, or as the case may be, the simplified method EIA used for assessment of the risk rate concerning particular facilities is necessary in the situation when large-scale rescues are not a realistic solution. This task is important even for reporting and decision-making on the future of old landfills (the costs of rescue of one single large landfill of chemical and communal waste in Chaba-ovice were assessed at approximately 1 billion US $).

5. Clarifying the technical and operational conditions for solidification as a method suitable for elimination and utilization of various types of wastes. The stability of the products of solidification worked into the building materials and deposited for long periods of time (many tens of years, even centuries) has also been a challenge.

From the **legislative and organizational points of view** a number of pressing problems have been already analyzed. In general, the most important thing in the mean time is to "absorb" a great number of regulations representing clearly a heavier work-load upon the personnel within the state administration and self-government as well as upon the entrepreneurs and employees in various industries than it is usual within the better-established environmental sectors (like water, soil, air or forest sectors).

As far as various tasks are concerned, I myself regard these as particularly important:

1. It is absolutely vital to elaborate a set of stimulative and repressive tools in order to prevent waste generation and decrease environmental hazards caused by wastes. This may be achieved through
   - effective packaging management, their regeneration and recycling in compliance with the recommendations of the EC and taking the experience of some European countries (Germany, the Netherlands) into consideration
   - publishing catalogues of non-waste generating technologies and supporting consultation services directed at their implementation
   - elaborating more detailed guidelines to help eliminate pollutants from material flows (Hg, Pb, Cd, PVC, Cl organic solvents or diluents, etc.)
   - aim at long-term functioning, repairable products with a high degree of regeneration ability (large electronic household facilities, computers and other electronic devices, cars, etc.) Also implementing the method of leasing where it is possible to offer complex services and not just provide a number of facilities and devices changing gradually into the consumers' waste.

2. A great fortitude is necessary when working on increasing the quality of particular waste management programs that appear to be the main tool of compliance and enforcement. It is also necessary to adjust and ammend particular regulations in accordance with the knowledge and information acquired within the practical activities.

3. As knowledge has been the key point in technical solutions and administrative economic decision-making in the environmental policy, training, education and efficient advertising is particularly important. Following an agreement between the education and environmental ministries, it is necessary to extend all the suitable forms of training for the wastes generators, state administration workers, self-governments and youth. To achieve a more profound relation to environmental protection it would be necessary to make use of vast possibilities of cooperation with foreign environmental institutions, especially with the NGO.

4. To achieve the desirable accent of the state administration when implementing enforcement to prevent waste generation and ensuring an efficient waste management it is necessary to increase deterrence. Unfortunately, under the situation when all the state administration is undergoing an essential restructuring process after the 1989 revolution, the idea that police, judicial institutions or other departments of state administration would participate on enforcement seems to be rather unrealistic. Nevertheless, as for the next couple of years, this task is highly actual and it is vital to seek the ways how to make use of good examples (see the Netherlands, etc.)

5. We are not much practically experienced in implementing efficient financial and taxation tools, may they be repressive or stimulative. Ministry of Finance tries not to make the implementation of the new taxation and fees system too complicated and thus it is difficult to push through controlled additional charges to the price to obtain in this way new means able to bring remedy. The additional charge proposed for oils that would help in realizing the collection of used oils, emulsions, etc. and their regeneration was repeatedly rejected. Even for resolving these problems it would be desirable to make use of the knowledge achieved in the market economy countries.

6. As we can see from the above mentioned themes, making use of the knowledge acquired by the EC countries, USA, etc. is currently highly actual. These countries realize compliance and enforcement since they have passed their legislations on waste management in the 70ies. One of the main and highly actual tasks has thus been improving the operation of information channels, certain coordination of activities and extension of the experience of prospective employees of state administration, self-governments, entrepreneurs, educationalists and NGOs.

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RESULTS OF THREE YEARS OF ENFORCEMENT OF REGULATIONS ON TRANSBOUNDARY SHIPMENTS OF HAZARDOUS WASTE IN THE NETHERLANDS

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SUMMARY

The EC-Directive on transboundary shipments of hazardous waste was implemented in Netherlands legislation on October, 15th 1988. At the same time, a special bureau was established, in order to enforce the Regulation on import, export and transit of hazardous waste.

This paper provides an overview of the experiences of this bureau, after three years of practical enforcement. The method of working and the Enforcement Strategy of the bureau are discussed. Finally some cases illustrate practical problems of enforcement of regulations on transboundary shipments.

The conclusion is that co-operation between authorities, the fast ratification of relevant treaties and, within the E.C., the effectuation of the Regulation on transboundary shipments of hazardous waste are of crucial importance.

Besides, it seems to be necessary to continue active, physical monitoring next to the inspection of documents, on the basis of an enforcement strategy including transboundary shipments of recyclable hazardous waste.

1 INTRODUCTION

The European Directive, pertaining to the import, export and transit of hazardous waste was implemented in Netherlands legislation on October 15th, 1988, when the Regulation on import, export and transit of hazardous waste entered into force.

This Regulation is a part of the Chemical Waste Act. In principle, import, export and transit of hazardous waste are not allowed, without permission of the competent authorities. The Regulation implies procedures for notification beforehand of the intended shipment and accompanying documents with the transport, proving the permission of the competent authorities.

The responsibility for execution of the legislation concerned rests with the central Government. Therefore, the Minister of Housing, Physical Planning and Environment is responsible for execution and enforcement of the legislation concerned.

Simultaneously with the decision to implement the E.C.-Directive, it was decided to start enforcement of the legislation seriously by creating a special bureau for the control of transboundary transports within the Environmental Inspectorate.

This bureau started at the end of 1989 with real enforcement of relevant legislation. At this moment the bureau has 19 staff members.

After almost three years of practical experience, some interesting aspects concerning enforcement of the legislation on transboundary shipments of hazardous waste can be mentioned. First of all the Netherlands policy concerning transboundary shipments of hazardous waste will be discussed briefly.

The amount of transboundary shipments of hazardous waste is illustrated in some figures. Next, the working method of the bureau, responsible for enforcement of the legislation concerned and the Enforcement Strategy to be followed, are discussed.

Finally, it will be useful to present some characteristic practical examples as well as some connected conclusions in general.

2 POLICY AND SOME FIGURES

2.1 Policy

The policy upon which the examination of applications for permission to import or export hazardous waste is based, is mainly described in plans and programs of the government. At the end of 1991 it was decided to create a new plan, the Multi-year Plan for Chemical Waste, in which the intended disposal system of chemical waste will be described in detail.

Like each country within the European Community, the basis of the Netherlands policy is that waste should be processed or disposed in the country of origin. However, a multinational approach is necessary for some specific waste substances. The special condition of the soil and the high density of population in the Netherlands play a role as well.

In 1991, the Netherlands had insufficient combustion- and dumping capacity for high toxic chemical- and some bulk chemical waste.

In short, the lack of sufficient capacity as well as the lack of disposal structures were, in general, reasons to allow the export of waste. Permission to import waste in order to process into the Netherlands will only be given if the disposal or processing of Dutch waste will not be jeopardized. At the same time, a criterium for allowing import is the fact that the country of origin have no or not enough possibilities to dispose of the waste.

2.2 Figures

Figure A shows the amount of imported waste in 1989, 1990 and 1991. The fluctuation in the amount of imported hazardous waste is caused by the import of contaminated soil to cleaning facilities.

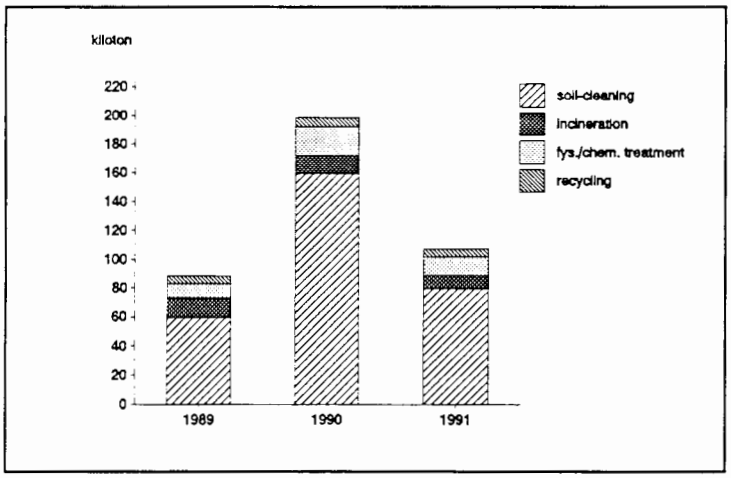

figure A

Figure B shows that the amount of exported hazardous waste in recent years has been stable, although there are significant changes in the way the waste has been disposed of. The amount of waste which is landfilled has decreased from 106,5 kiloton in 1989 to 63,5 kiloton in 1991. On the other hand, the amount of waste which is incinerated has increased from 55,5

kiloton in 1989 to 81,5 kiloton in 1991. The amount of hazardous waste which was transported in transit via the Netherlands was 29,5 kiloton, excluding non-ferrous metals destined for recycling. In 1990, this was 38,5 kiloton.

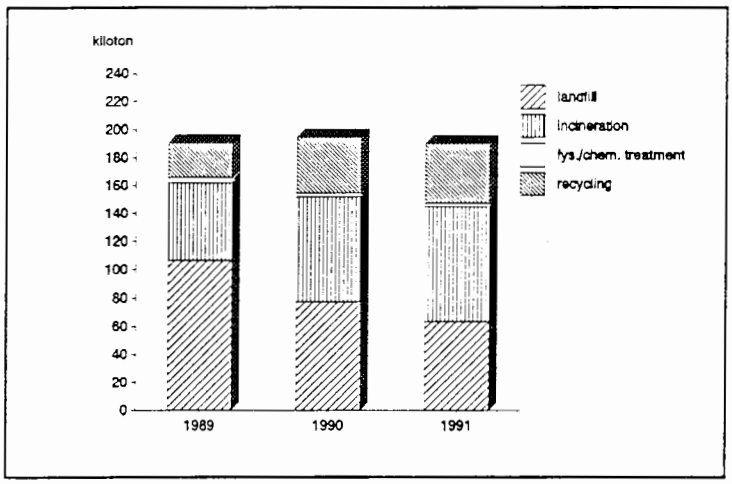

figure B

The following table (figure C) shows the relationship between the Netherlands and 7 countries playing an important part in the import into, export out of and transit of hazardous waste via the Netherlands. The table gives the number of companies involved with transboundary shipments of hazardous waste. It is found that our direct neighbouring countries are the most important partners. There is a clear connection concerning transboundary shipments of hazardous waste with particularly Germany and Belgium, but also with the United Kingdom. More-over, waste is exported to France, while Ireland and Italy are important countries of import and transit.

Country	Type of company		
	Producer	Holder	Consignee
The Netherlands	185	100	29
Germany	100	58	34
Belgium	20	30	18
United Kingdom	3	4	20
France	1	1	8
Ireland	13	14	-
Italy	14	7	-

figure C

It is found that 95% of the Netherlands waste to be exported is shipped to Belgium, Germany and France. More than 70% of the transit of waste through the Netherlands originates from Germany. The United Kingdom is an important country of destination. Particularly Germany and Belgium export waste into the Netherlands.

3 METHODS OF WORKING

3.1 The organization

Concerning the enforcement philosophy to be followed, the choice was made to set up a centrally organized and managed enforcement unit with a partly regionally located staff. The arguments for choosing such a centrally organized and managed enforcement unit are the following:

- transport and transboundary shipments are no local/regional, but nationwide affairs;
- it is important that the number of authorities with final responsibility in this field will be limited;
- enforcement of an international Regulation requires a central information- and co-ordinating unit at central government level;
- politically, the creation of a recognizable enforcement unit was considered important;
- value was set on national consistent action, meaning clear and unambiguous actions, in case of violations of the Regulation;
- reasons of effectiveness and efficiency.

In order to respond quickly to signals from the network, the central unit is attended by field inspectors, who mainly perform the executive activities and live and work in their own region. Therefore, the bureau divided the Netherlands into three regions.

A clear distinction between the tasks and responsibilities of the central and regional units should optimize effectiveness of enforcement.

Management, co-ordination, information, planning and (judicial) support are the principal tasks of the central unit, as the field inspectors are mainly occupied with, as already said, executive activities like monitoring compliance and taking action against violations.

Next to the way in which the enforcement unit has been organized, a second important principle is the co-operation with several other authorities. These authorities are, because of their own responsibilities, able to do activities in the field of enforcement of legislation on transboundary shipments of hazardous waste.

These authorities, the network, are mostly involved in enforcement, like the customs, police, port authorities, foreign colleagues, etc.

The network is of crucial importance because these authorities can fulfil an "eye and ear function" and/or do activities concerning transboundary shipments of hazardous waste.

3.2 Experiences with this method of working

At the end of 1991, the effectiveness and efficiency of this way of working has been evaluated.

This evaluation made clear, that the activities of the enforcement bureau contribute highly to the prevention of illegal transboundary shipments of hazardous waste. For example, the number of notifications of non-ferrous transports increased from 100 to about 600 monthly.

Furthermore, the evaluation made clear that it would be worthwhile to emphasize co-operation with the network, in order to improve effectiveness and efficiency of enforcement.

The intention is to start a process of change in the coming years by which next to the "eye and ear function", also less complicated activities could be done by the network, with the central

bureau within the Environmental Inspectorate as the co-ordination and information centre.

The central bureau, as the national working enforcement unit will specialize in complex large scale enforcement activities.

In short, an adequate level of enforcement concerning international legislation is achieved by:

- the creation of a central enforcement unit and the use of enforcement officials who are specialized in the enforcement of the regulation involved;
- the organization of one central information and co-ordination centre;
- the realization of an optimal co-operation with the network, including international authorities.

4 PHILOSOPHY OF ENFORCEMENT

4.1 The Enforcement Strategy

In order to realize planned and systematic action against offenders of legislation concerning transboundary shipments of hazardous waste, a so-called Enforcement Strategy (a concrete enforcement policy) has been developed. This Enforcement Strategy has been created as follows.

First of all the violations have been classified in relation to the impact of the violation on the basis of uniform judgement criteria.
Violations have been divided into two categories:
Category 1: procedural or administrative violations;
Category 2: transboundary transports without transport- or receipt notification.

Further, relevant policy decisions and interpretations of legislation have been examined and included in the Enforcement Strategy.

On the basis of this information, an Enforcement Strategy has been made. This strategy describes the enforcement action which should be taken in case of a particular category of violations. It is described as well at which moment action should be taken and who is responsible.

The Enforcement Strategy mainly consists of the following;

- In case a "category 1 violation" is established for the first time, a warning letter is sent to the company involved, eventually combined with an inspection visit. The offender should take measures in order to comply with legislation.
- In case of recidivism, criminal action is taken by making an official report to the public prosecutor.
- In case a "category 2 violation" is established, in principle, criminal action will always be taken and an official report will be made. In certain cases, the Public Prosecutor is advised to impose a so-called preliminary measure, in order to freeze the situation so that no further environmental damage can be caused. Complementary administrative enforcement measures can be taken.

The administrative approach includes two possibilities of taking action. In the first place, hazardous waste which has been imported or exported illegally, can be returned to the country of origin at the expense of the offender by using an administrative compliance order. It is possible as well to impose a "dwangsom", meaning an administrative compliance order which includes an economic compliance incentive of significant sums for each day of continuing violation.

4.2 Experiences with the Enforcement Strategy

It was found that the Enforcement Strategy creates clarity which is appreciated by both the Public Prosecutor and the network.

In cases of non-compliance with the Regulation on import, export and transit of hazardous waste, there is always an international component. Foreign companies act contrary to the law as well, which makes efficient and effective enforcement more complicated.

Therefore, the following practical solutions are used in relation to companies:

* Compliance with the Regulation could be achieved via the Netherlands companies, by advising them to urge their partners to comply with Dutch legislation.
* Dutch companies, like agents, transporters, storage or transhipment companies etc. are responsible for a proper course of affairs.
  This implies that they are responsible as well for compliance with the Regulation. In case of no compliance, criminal action and/or administrative action can be taken.
* A warning letter is sent in case a foreign company acts contrary to the Regulation. Official reports are made as well and compliance order or a dwangsom can be used.

Apart from the specific Netherlands legislation, the following complicating factors play an important role in general:

- Different countries use different definitions of waste. Waste in one country is considered as commodity in the other country.
- The definition of hazardous waste is not uniform in each country.
- The way in which the E.C.-Directives have been implemented in national legislation differ from one another.
- For non-E.C.-countries, the differences in definitions and legislation concerning transboundary shipments of hazardous waste are even larger.

By reason of the above mentioned factors, there is often a lack of knowledge of legislation in other countries. Sometimes this results in a lack of co-operation between foreign countries. Other countries do not or can not always respect violations of regulations, because the situation is not contrary to law in the own country, or because they do not know the legislation in other countries. In the following part, examples of the above mentioned will be given.

This kind of problems can be solved by:

* to further a fast ratification of treaties on international level, like the Treaty of Basel;
* to effect as soon as possible the Regulation on transboundary shipments of hazardous waste within the E.C.;
* finally, to promote the bilateral exchange of information on legislation and enforcement and to make formal and informal appointments and covenants between the authorities in the different countries.

5 CASES

5.1 Case 1: transit of zinc waste

Below, the transit of zinc waste via the port of Rotterdam is described, on the basis of 2 separate (but related) cases.

January, 18th. 1991:

The river police of Rotterdam found a shipment of zinc waste in the Port of Rotterdam, stored in a warehouse, in order to be transported to Poland for recycling.

This material is a non-ferrous waste and contains high amounts of hazardous "heavy metals" such as cadmium and zinc.

For transit via the Netherlands compliance with the Regulation on import, export and transit of hazardous waste is obligatory.

In case waste is considered as non-ferrous waste, from which the non-ferrous metals will be recycled, it is possible to use a simplified procedure. This means that it is not necessary to ask permission for the transport beforehand. However, the transport should be notified and should be accompanied by documents, proving recycling of the waste.

Because the company involved did not comply with the procedures, the bureau responsible for the enforcement made an investigation in order to find the origin of the waste. It was found that the waste origins from several companies in a nearby country and was collected by an other company in that country. The latter transported the waste to Rotterdam in order to export it to Poland. The Polish authorities were asked whether they agreed with the import of this material to Poland or not.

The authorities made clear that they did not want to import this kind of waste. Recycling of this kind of waste in an environmentally safe way was not possible in Poland.
The Netherlands tried to get help from the country of origin and the company concerned, in order to return the waste to the country of origin. Up till now it has not been possible to return this waste. The waste still remains in Rotterdam, waiting for reshipment to the country of origin.

May, 28th. 1991:

Another shipment of zinc waste was found in a warehouse in Rotterdam, the same where the above mentioned zinc waste has been stored.

The composition of this waste is almost the same as the composition of the above mentioned zinc waste.

This waste was also collected in the same nearby country by a company that turned out to be the neighbour of the company collecting the other shipment of zinc waste!

This shipment was not bound for Poland, but for the former USSR. We found out that the Soviet company involved was a production factory of injection-needles, which has nothing to do with zinc waste.

We formally asked the Soviet authorities to agree with the import of this waste. They answered that it was not allowed to import this kind of waste to this company. The waste still is stored in the Port of Rotterdam as well.

5.2 What can we learn from these examples?

5.2.1 Non-ferrous recycling

These two examples, that are closely related, illustrate the problem with "recyclable" non-ferrous waste. The Netherlands of course stimulate the recycling of non-ferrous waste. Recycling does not only prevent that these hazardous waste pollutes the environment, but enables the re-use of these substances as well.

However, our practical experience with enforcement shows that large quantities of hazardous waste are shipped round the world, wearing false colours.

Next to it, it is possible that the trader really intends to offer a shipment non-ferrous waste for recycling, although there is no client at that moment. After the transport, it is found that efficient economical recycling is not possible. However, the transboundary shipment of hazardous waste already took place illegally.

Finally the simplified non-ferrous procedure is used by people who are not very particular with the environment, shipping unrecyclable hazardous waste, without permission of the competent authorities.

In short: it is important to continue the regular inspection of non-ferrous transports, even if transports of non-ferrous waste will be shipped like transports of "general cargo" in the future (OECD-decision). It is important as well to find an international standard definition of recycling (can we speak about recycling if only 5% of a waste shipment can be recycled and 95% is dumped).

5.2.2 Waste or commodity

In 1991 when it became clear that there was no destination for the above mentioned waste, the Netherlands tried to co-operate with the country of origin, in order to return the waste to the sender by using administrative compliance order. However, in the opinion of the country of origin the material was no waste but commodity. Therefore this country refused co-operation. Therefore, the procedure of administrative compliance order could not be used.

It is very important to come to one definition of waste with regard to commodity and one list of hazardous waste and non-ferrous metals.
Till that time the countries concerned should respect legislation in other countries. There should be compliance with legislation in all countries concerned.

At this moment a dwangsom-procedure has been started against the companies in the country of origin. However, due to the problem of borders, up till now it has not been possible to force the companies to pay.

5.3 Case 2: export of hazardous waste via an agent

In July 1991 the enforcement bureau was called by a customs office at the border between the Netherlands and Belgium.

The customs found a tank-container with - according to the forms - an oil/water mixture, which is considered as hazardous waste, coming from France, via Belgium to the Netherlands. Such a shipment should be accompanied by a special form, indicating that approval for this shipment has been given by the competent authorities.

In case of the above mentioned tank-container, the information on the notification form did not fully comply with the shipment:

- the date of transport on the form did not correspond with the actual date of transport;
- according to the forms, the shipment should be transported from the Netherlands to France, instead of the opposite.

The enforcement bureau detained this transport. It was found that a Netherlands producer exported this waste to a processing company in France. The driver declared that he left the Netherlands two days before, the date mentioned at the form. The transport had not been inspected then. The processing company in France took samples, in order to analyze the material. The waste was refused on the basis of this analysis and returned to the original producer. The French company refused the waste, because of no compliance with the acceptation norm. The samples of this waste showed a percentage of 3% organic chlorines, more than allowed in the environmental license of the processing company, for which no logical explanation could be given. The maximum percentage which could be processed by the French company is 2% organic chlorines.

Samples were taken and it was found that the accompanying forms did not correspond with the contents of the tank-container. False colours were worn.

As a result, an investigation was started in order to find out if waste substances were frequently exported to France in this way. Therefore, the customs were asked to "signalize" the agent concerned, which means that the computerized customs-system automatically gives a signal in case transports from this agent are im- or exported.

In October 1991, 8 transports were signalized within one week. These transports came from different producers, but were shipped by the same agent. After inspecting, samples were taken from 6 containers. One of this containers has been refused in France as well.

As a result of the above mentioned and due to other signals, it was suspected that this waste agent illegally organized transboundary shipments of hazardous waste for other companies. Furthermore, it was found that this agent made his clients believe, that he had a Chemical Waste Act license, which turned out to be untrue.

In consultation with the Public Prosecutor, it was decided to do a judicial investigation, which has been started by the local police with the assistance of a specialized division of the Environmental Inspectorate, the Environmental Assistance Team. At this moment this investigation has been completed successfully. We are waiting for this case to appear before the court of law.

5.4 What can we learn from this example?

First of all, it is important to inspect regularly, in order to check if the transport corresponds with the forms. The experiences with enforcement show that shipments with hazardous or non-ferrous waste sometimes did not correspond with the notification.

Secondly, this example shows the importance of international co-operation between both monitoring and criminal investigation authorities. Offenders of legislation cross frontiers and take advantage of bad co-operation and, as a result, ignorance of authorities.

In the third place, close co-operation between monitoring and criminal investigation authorities is of crucial importance.

In the Netherlands, the infrastructure has been created in such a way, that for criminal investigation relevant monitoring findings and information found by inspection activities within the Environmental Inspectorate, are joined at one central information point, the Central National Information point Environmental Crime (CLIM).

Furthermore, a specialized unit at the Environmental Inspectorate can support judicial authorities in case of a criminal investigation. This unit has well trained specialists who can assist in case of the necessity of a criminal investigation. Information is available at the Central National Information point Environmental Crime.

Finally, this case shows that monitoring compliance and enforcement are necessary for the whole waste chain, from the original producer till the final processing company and all connected links. Decentralisation of enforcement competencies often takes place at the same time with decentralisation of licensing competencies. This is defensible from the point of view of efficiency, provided that the central authority remains responsible for enforcement of legislation for the whole chain.

6 CONCLUSIONS

In general, on the basis of three years of practical experiences in enforcement, the following conclusions can be drawn.

A. Co-operation with other authorities (on national and international level) is of crucial importance for the approach of enforcement of legislation concerning transboundary shipments of waste.
Making appointments, in order to realize an adequate exchange of information and the respecting of responsibilities and possibilities of each other, will result in an effective approach.

B. Next to the "inspection of documents", active physical inspection is necessary. The total waste chain deserve particular attention (from the cradle to the grave).
Furthermore, there should be consistency between monitoring activities and actions as a result of violations.

C. Monitoring compliance should take place on the basis of the Enforcement Strategy. Prompt action is necessary, in order to maximize the deterrence of enforcement activities.

D. Practical experiences with enforcement show that all sorts of hazardous waste are shipped all over the world, pretending recycling, without adequate inspection of the environmental consequences. Therefore, it is very important to continue the inspection of this waste shipments, particularly in case regulations will be relaxed.

E. Within the E.C., the quick effectuation of the Regulation on transboundary shipments of hazardous waste and the related standardization of legislation concerned is essential. Worldwide, a fast ratification of treaties like the Treaty of Basel is necessary.

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THE ROLE OF THE CITIZEN IN ENVIRONMENTAL ENFORCEMENT

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SUMMARY

This paper explores the ways in which citizen involvement can improve the fairness and effectiveness of environmental enforcement. Section 1 of the paper discusses the overall value of such citizen involvement. Section 2 surveys the wide range of roles citizens can play in the enforcement process. Section 3 focuses on ways in which citizens can use the courts to work towards environmental enforcement goals. Section 4 examines citizen involvement in practice, highlighting some practical considerations relevant to designing and implementing citizen participation mechanisms.

1 INTRODUCTION

Citizens are one of a nation's greatest resources for enforcing environmental laws and regulations. They know the country's land and natural attributes more intimately than a government ever will. Their number makes them more pervasive than the largest government agency. And because citizens work, play, and travel in the environment, each has a personal stake in its beauty, health, and permanence. (1) Citizens are omnipresent, motivated, and uniquely interested in environmental quality.

A bird-watcher walking in the woods sees chemical waste flowing through a stream, traces the source to a neighboring factory, and alerts government agencies to the factory's violation of its emissions discharge permit. A local citizen group in a small town near a coal mine suggests to a state mining agency practical ways, based on the citizens' own observations of the mine in operation, of making environmental standards for mines easier to administer and enforce. A city resident notices that municipal buses are emitting noxious fumes, sues the bus company, and wins a court order requiring the company to place pollution control devices in the bus exhaust systems. These are just a few examples of the many and varied influences citizens can have on the process of environmental enforcement.

Drawing on the resources of citizens can enrich and strengthen the environmental enforcement process in several ways. First, citizen participation in environmental enforcement taps the direct, immediate connection between individuals and their environment. Citizens are uniquely knowledgeable about their own communities. Their day-to-day observations give them access to information about environmental conditions that the government could never obtain. Involving citizens in environmental enforcement encourages productive use of this information.

The intimate connection between individuals and their own communities also enables citizens to concentrate on localized environmental problems. A federal or even a state government agency might not consider such "small-scale" threats to the environment serious enough to justify action on the national or regional levels. But correcting these harms can be vital to the survival of a particular town or rural area. Citizen participation in environmental enforcement thus broadens access to enforcement resources.

Second, the injection of varied, non-institutional perspectives and information sources into the enforcement process may improve the quality of enforcement decisions. For example, the views of individual users of a national park on how a ban on logging in the park should be

implemented may well differ from those of a timber company that wants to restrict logging by its competitors. Both are likely to be different from the position of the government enforcement agency which lacks the funds to investigate and prosecute violations. Allowing and encouraging the hikers and loggers to affect the outcome, by, for example, participating in government enforcement actions or suing on their own to implement the ban, may increase compliance, deter violations, and contribute to a more realistic and responsive environmental enforcement strategy.

The dynamic between citizens and the government agencies officially charged with enforcing environmental laws adds to the potential effect of citizen participation in this area. In the context of environmental enforcement, citizens and government are presumed to share a goal -- that of maximizing compliance for the good of all. This presumption of a common interest is reflected in the dual meaning of the adjective "public," when used in conjunction with the operation of a democratic system of government. In this context, "public" refers both to the citizenry at large -- which engages in "public participation" -- and to the government -- which formulates and implements "public policy."

Yet tension sometimes arises between these two "public" entities. The government may fear that citizen involvement in environmental enforcement will disrupt its own enforcement efforts and will reduce its flexibility to tailor enforcement decisions to particular circumstances. (2) Government enforcers may also believe that if enforcement actions in the courts are mounted on a piecemeal basis, rather than as part of a coordinated strategy, poor judicial precedents may be set that could hinder further enforcement efforts. (3) Consequently, government agencies sometimes decline to support, or may even resist, private enforcement initiatives.

Citizens, on the other hand, often suspect government agencies of not properly fulfilling their enforcement responsibilities. Citizens may view government employees as overly susceptible to the influence of the business interests they regulate. (4) Or they may attribute government inaction to bureaucratic inertia. Either way, agency enforcers often are seen as overlooking or impeding environmental protection goals. (5)

This tension between government and citizens can result in improved environmental enforcement. The government's desire to prevent citizen action it views as disruptive can encourage agencies to take their own regulatory or enforcement steps. The public's suspicion that government may not vigorously implement certain laws may prompt the legislature to grant citizens a statutory right to bring a lawsuit to require the government to perform its assigned regulatory duties. And in instances when the government insists on inaction, citizen participation can replace government enforcement. Not only may compliance be achieved, but the government can be forced to account publicly for its own inaction. (6)

When the interests of the government and the citizens are similar -- as is often the case -- individuals can fill gaps in government enforcement caused by resource constraints. (7) The sheer size of the citizenry, for example, enables individual citizens to monitor compliance throughout the nation and identify violations an understaffed investigative agency might miss. An enlightened government agency can also use citizen volunteers to implement a comprehensive enforcement strategy. This could both help the government meet its enforcement objectives and avoid the potential conflicts that may result from piecemeal enforcement efforts.

Finally, public involvement in enforcement is a logical next step for democratic political systems that have encouraged public participation in the creation of environmental statutes and regulations. (8) Allowing citizens to have a concrete role in implementing the regime they helped to design strengthens public support for and awareness of environmental goals. If citizens are denied a role in enforcement, or if they are not educated about and encouraged to assume a permitted role, even the most sophisticated system of environmental protection laws may exist only on paper. Several countries in Central and Eastern Europe, for example, have for years boasted a system of stringent environmental controls. Yet these provisions have seldom been enforced by the government. (9) Nor do these countries have a tradition of citizen participation in public affairs that can be drawn on to promote or supplement government action. Developing and nurturing a role for the citizens in enforcement efforts could provide the missing ingredient necessary to make these countries' environmental protection goals a reality.

On paper, the environmental laws in Central and Eastern Europe are not dramatically different from those in the United States. Yet the U.S. has been more successful in implementing

and enforcing those laws. One major difference between the two systems is the role of the citizen in the environmental enforcement process. The public has played an increasingly important role in the U.S. in forcing industry and government to comply with environmental statutes since the beginning of the modern environmental movement in the late 1960s. Over two decades of U.S. experience with citizen enforcement mechanisms have distilled some principles that may be applicable in other countries as well. Drawing on the experience of the U.S. and of selected other countries with various forms of citizen enforcement efforts, this paper analyzes various avenues for public participation in environmental enforcement.

2 THE RANGE OF PUBLIC INVOLVEMENT IN ENVIRONMENTAL ENFORCEMENT

Avenues for public participation in enforcement are many and varied. Some require special expertise, and some require only energy and common sense. Some involve working alongside the government, some place the citizen in the shoes of the government, and some call for citizens to oppose the government's activities. Some require extensive financial expenditures, and some cost only time. Separately or in concert, these mechanisms can help to effectuate compliance with environmental controls.

2.1 Collecting Information for Use in Enforcement

On the most basic level, citizens can use their eyes and ears to identify areas in need of further regulation and to monitor compliance in areas already regulated. (10) Individuals are uniquely qualified for this role. As ever-present observers in their local communities, citizens are particularly good at identifying unusual occurrences. They may, for example, notice the presence of an oil sheen on a river, an unusually serious emission from a smokestack, or the activity of a developer in a swamp. These occurrences might escape the government enforcer unfamiliar with community conditions and unequipped to perform frequent field investigations. Citizen monitoring can occur informally, as a result of chance observations of individuals in their communities. Citizens can also monitor on a more regular basis through community, regional, or national environmental organizations.

Such citizen participation in information-gathering and reporting efforts is critical if enforcement goals are to be met. The sheer size of environmental problems and the increasing demands on limited government resources combine to make environmental agencies woefully unequipped to perform all necessary investigatory and monitoring duties. In the United States, for example, over 60,000 permits have been issued under the Clean Water Act alone -- only one of several environmental protection statutes -- and government funding for enforcement efforts has consistently fallen throughout the last decade. (11) Government agencies simply cannot take full responsibility for gathering the information necessary for effective environmental enforcement.

2.1.1 How to Assemble Information

2.1.1.1 Physical Observation

Methods of collecting valuable environmental data are numerous. One way is to gather information from physical observation. For example, some organizations in the United States have begun "harborwatch" programs to identify oil spills or other emissions in local harbors. (12) Others teach citizens to "walk" streams, identifying locations of pollutant emissions and observing the effects of these emissions on water quality or indicator species. (13) Although detailed scientific monitoring of pollutants is too expensive and complex for most individuals to undertake, certain simple tests (judging the density of plumes of air pollutants, for example) can be learned by citizens. (14) Violations identified through these information-gathering activities can then be reported to environmental organizations or government agencies or can be publicized through the media.

Because of the benefits that can be gained from citizen monitoring, government often chooses to promote these activities. Government support may range from establishing an office to receive reports of violations to providing funding for citizen groups collecting environmental information. Through such programs, federal and state government agencies in the U.S. have been able to accomplish monitoring that would otherwise be impossible by tapping into the time and energy represented by concerned individuals.

Although many environmental problems are obvious from a distance, it may be difficult for citizens to acquire detailed information about threats to the environment that can only be perceived at close range. Sometimes citizens can take advantage of public access to natural resources to scrutinize potential violations. For example, in the United States, the public is allowed access to rivers, streams, and beaches, and can use those routes to approach and examine points of pollution emission. (15) If access via public waters is not possible, a more costly alternative for obtaining information would be to take to the open skies to monitor pollution emissions or the management of natural resources from the air. (16)

In most cases, however, the activities that threaten to violate environmental controls will take place on private property to which citizens will not have direct access. One approach to encouraging citizen involvement in environmental enforcement would be to permit citizens to enter private property to undertake environmental monitoring when warranted by a serious threat to public health. Another option would be to allow citizens to assist the government in carrying out its own environmental monitoring activities. For example, water quality legislation in Argentina allows private parties who have filed a complaint about a facility to participate in any inspection of the facility during the investigation. (17)

Another means of obtaining access to private property for monitoring purposes is for a citizen to file a lawsuit against an alleged violator. In the United States, filing such a lawsuit allows a plaintiff to conduct discovery on topics relevant to the case -- including, in lawsuits brought to enforce environmental laws, the extent of the pollution caused by the alleged violator. As part of this discovery process, the court can order the defendant to admit the plaintiff to its property to collect such information. (18)

2.1.1.2 Use of Government Information

Citizens can also gather data about environmental violations through the use of information collected by the government, either through its own efforts or by means of reporting requirements imposed on polluters. In the United States, for example, many federal and state environmental regulations require regulated parties to submit periodic reports about their pollution emission levels or their storage, use, and discharge of hazardous materials. (19)

In order for the information gathered by the government to benefit the public, citizens must be afforded access to that information. Several means of citizen access to government-held data are provided in the U.S. Some U.S. environmental statutes that impose self-monitoring and reporting requirements also require the data reported to be made publicly available. In addition, the federal government is subject to a generalized information access law, under which the public can ask to review or copy certain information in the possession of government agencies. (20) Finally, for citizen monitoring to be truly effective, it is important that citizens be able to compare the monitoring reports against clear compliance standards, such as individualized permits or regulatory limits. (21) These standards must also be publicly available.

2.1.2 How to Use Information

Once citizens have gathered environmental data and sifted through it to identify violations, they may put their information to a number of uses. One possibility would be to approach the violators directly in an attempt to induce voluntary compliance. Publicizing the violations in the press or through community meetings could create pressure on industrial polluters to comply.

The citizens could also choose to alert the government to their findings. In the United States, most state and federal agencies are set up to receive information reported through both formal and informal citizen monitoring. (22) Of course, there is no guarantee that agencies

can or will act on the report of a citizen. If the government decides that enforcement proceedings are warranted, however, information gathered by citizens -- or testimony about observations by citizens -- may be used in court as evidence against the violators. Under some U.S. statutes, if the information provided leads to a criminal conviction or civil penalty, the government may reward the reporting citizen with up to $10,000. (23)

Alternatively, citizens may be able to use the information they have collected by going to court themselves to enforce environmental controls. (24) For example, after collecting and analyzing a large volume of water pollution reporting data, one U.S. environmental organization filed a series of lawsuits against industrial polluters who were violating toxic discharge limits contained in their permits. This concerted litigation effort was largely responsible for the initial growth of citizen suits in the United States in the mid-1980s. (25) Considerations relevant to determining how citizens might be able to advance environmental enforcement goals through the court system are discussed in more detail in Section 3 of this paper.

2.2 Participation in Government Regulatory or Enforcement Action

A second avenue of citizen involvement in environmental enforcement enlists the resources of citizens to complement agency regulatory or enforcement efforts. In this context, the government will have chosen a particular vehicle for accomplishing environmental protection goals, and the citizen will bring his or her viewpoint to bear in ensuring that the government's actions are as well-informed and effective as possible.

2.2.1 Commenting on Regulations and Permits

A government agency charged with administering an environmental statute may have decided to issue a regulation setting specific standards by which to achieve the goals spelled out in the law. Or the agency may have already established such standards, and it may be working within them to determine the content of a particular polluter's environmental permit. Allowing the public to comment on proposals for regulations or on the terms and conditions of permits may aid in future enforcement activities. The public can contribute practical knowledge of real-world conditions that will help the agency to devise rules or issue permits that are feasible and effective. In addition, the public can review the regulations and permits with an eye towards future enforcement efforts and ensure that the regulations and permits contain clear standards and procedures that will ensure simple and effective enforcement. (26)

2.2.2 Participating in Government Enforcement Actions

If the government has chosen to bring an enforcement action against an alleged polluter, a citizen can still play a role in the enforcement process. Several mechanisms exist in the United States that permit citizens to make their views known during enforcement proceedings. For example, citizens may intervene in suits brought by the government against potential violators. By joining a lawsuit as an interested party, a citizen would not have primary responsibility for prosecuting the case, but could still take part in negotiations and make his or her perspective known to the judge. Because the court may be reluctant to strain judicial resources by allowing unrestricted participation in the lawsuit, the right to intervene might normally be limited to citizens with tangible interests in the outcome of the case. (27) However, most U.S. environmental statutes that authorize citizen enforcement suits also grant citizens the right to intervene in government enforcement proceedings. (28) In any event, even citizens with purely ideological concerns can participate in a case by filing non-binding *amicus curiae*, or friend-of-the-court, briefs setting forth their positions.

2.2.3. Reviewing the Terms of Consent Decrees

Finally, the filing of a lawsuit, or even the threat of a lawsuit, by the government will typically lead to negotiations between the government and defendant. In many cases, the parties

can agree on a settlement without resorting to a court adjudication. In enforcement actions, these agreements, called consent decrees, are usually entered with the court as a sort of contract between the parties and have the same enforceable effect as a court judgment. If a citizen has intervened in the case, that citizen will be a party to the consent decree and will be involved in the settlement negotiations. (29) Even when a citizen is not actively participating in the case, the government prosecutor may be required to publish the proposed consent decree and request public comment on the decree. (30) Any comments by the public on the decree can be filed with the court, which will take them into account in approving or rejecting the agreement.

2.3 Recourse to Courts When Government Is Unwilling or Unable to Act

A third category of citizen involvement consists of instances in which the public may seek direct access to the courts to accomplish environmental enforcement objectives. For example, citizens may go to court to prompt tardy government regulatory action. The defendant in such a case would be the responsible government agency, in its capacity as a regulator.

Alternatively, citizens may mount enforcement actions against violators of environmental controls when the government lacks the desire or the ability to prosecute. In the course of its operations, the government itself may engage in conduct that harms the environment. This is particularly true in countries, such as the post-communist nations in Central and Eastern Europe, in which industry and property ownership have been nationalized. Therefore, the defendant in an enforcement suit could be either a private party or a government agency acting in its proprietary, rather than its regulatory, capacity.

2.3.1 Lawsuits Pressuring Agencies to Regulate

2.3.1.1 Non-Discretionary Agency Decisions

Most environmental protection statutes in the United States set forth general goals or objectives, while delegating to an administrative agency the responsibility of implementing those general goals through regulations and the issuance of permits. For example, a statute may direct that discharge of toxic pollutants into surface waters be reduced by a certain percentage, and it may charge the agency with the tasks of defining which pollutants are covered by the directive and approving plans to achieve the specified goal. If the agency does not perform its obligations under the statute, the target set forth in the law will never be achieved. One essential role of citizens may be to ensure that agencies carry out the tasks the legislature has assigned to them.

Citizens could be permitted to fulfill this role in several ways. One way would be to allow citizens to go to court to force agencies to perform their specific statutory assignments. Several U.S. environmental statutes contain provisions allowing citizens to seek judicial review of an agency's failure to act as the legislature has instructed. (31) These provisions permit "any person" to bring suit against an agency for failure to perform an act or duty which is not discretionary under the statute -- i.e., for not doing something that the statute says the agency "shall" do. (32) The citizen must notify the agency before bringing the suit to give the agency an opportunity to avoid litigation by performing the required regulatory action. If the citizen wins the suit, the court may order the agency to perform the act or duty it has delayed. (33)

2.3.1.2 Discretionary Agency Decisions

Although the mechanisms described above allow citizens to require government action in cases where the legislature has mandated it, they do not necessarily extend to situations in which the decision whether or not to regulate is within an agency's discretion. Nor do they allow citizens to prescribe the content of the regulatory action taken by the agency. In the United States, citizens can challenge discretionary agency decisions about whether and how to regulate, either under particular environmental statutes or under a generalized act governing the

procedures to be followed by administrative agencies. (34) However, prevailing in these discretionary suits is difficult. Typically, an agency's substantive decision will be reversed only if it is found to be "arbitrary and capricious" or if it is "contrary to law." Courts have interpreted the "arbitrary and capricious" requirement as warranting reversal of an agency action only when the action lacks any reasonable basis in fact. Moreover, U.S. courts tend to defer to agency decisions in matters within the regulatory expertise of the agency. Courts will even defer to a "reasonable" agency construction of the statute the agency is administering, barring clear statutory language to the contrary. (35)

Even though it may be difficult for citizens to succeed in such suits by challenging the substantive outcome of a discretionary agency decision, challenges to the method by which the agency reached its conclusion may be more promising. Experience in the United States has shown that courts will defer to agencies' substantive decisions, but only if they are sure that the agency has taken a "hard look" at the available options. If the decisionmaking process appears sloppy, or if the views of certain constituencies have been entirely ignored, the court may find that the agency has acted in an "arbitrary and capricious" manner. The threat of citizen challenges to discretionary decisions is thus an effective means of ensuring that agencies at least consider the perspective of the public in their decisions. (36)

2.3.1.3 Enforcement Decisions by the Agency

In the United States, the reluctance of courts to infringe on the discretion of government agencies has also precluded the public from contesting an agency's decision not to take a particular enforcement action. Federal and state agencies in the United States enjoy the doctrine known as "prosecutorial discretion," which leaves the decision whether or not to enforce a requirement against an individual entirely to the judgment of the prosecuting party. (37) Even though citizens cannot force agencies to take enforcement action, they may be able to take on the role declined by the agencies and sue the violators themselves. (38) These citizen enforcement actions are discussed in Section 2.3.2 below.

2.3.2 Lawsuits Pressuring Others to Comply with Laws, Regulations, and Judicial Standards

If the government has made clear its intention not to prosecute, or even simply if a citizen has a personal stake in a matter that a remedy provided under an environmental statute cannot adequately satisfy, the citizen may decide to enforce environmental controls against a violator. In the United States, citizen enforcement of environmental controls can be pursued directly by means of citizen suit provisions contained in particular environmental protection statutes.

Even in the absence of a statutory authorization of citizen suits, opportunities exist for citizens to obtain judicially-enforced sanctions against industrial or government polluters. Countries with systems of rights and remedies that have evolved from a tradition of case-by-case adjudication, such as the United States or Great Britain, offer "common law" causes of action to protect against or redress environmental harms. And in other countries whose legal system is based on a civil code, that code may provide general environmental rights that can serve as the basis for judges to remedy environmental harms in particular cases.

2.3.2.1 "Citizen Suits" or "Enforcing Suits"

One method of harnessing the energy and commitment of citizens to effectuate public environmental protection goals is to authorize citizens to enforce environmental laws and regulations. In the United States, most environmental statutes contain "citizen suit" provisions enabling citizens to prosecute violators of the statutory regime. (39)

Such citizen suit provisions have their roots in over two hundred years of U.S. law. Since 1790, United States citizens have been able in limited cases to sue to vindicate certain public rights -- those granted by statute to the population as a whole. (40) These citizen suits have been used to enforce federal regulations in diverse areas ranging from antitrust to consumer

protection. (41) Citizen suit provisions are said to create "private attorneys general," for they confer upon the individual the right to enforce public laws against other citizens.

Although the concept of a citizen suit is not new, the statutes permitting citizen enforcement of environmental laws and regulations are unique. In most other areas where citizen suits are permitted, a personal economic interest, such as an interest in correcting unfair competition or preventing fraud, must coincide with the claimed public rights. In citizen suits brought under environmental protection statutes, however, there is no such personal economic stake in the outcome. The environmental statutes truly provide citizens with the authority to represent the interests of the public. Environmental citizen suits, in their strongest form, might even be characterized as permitting citizens to sue on behalf of the environment itself. The United States is almost unique in this grant of power to the private citizen: Few other nations have extended such rights. (42)

The U.S. Clean Air Act (CAA), enacted in 1970, was the first federal environmental statute of the modern era with a citizen suit provision. The CAA provision's underlying structure is the basis for citizen suit clauses in almost every other major piece of federal environmental legislation. Today, citizens can bring suit against private parties and government for violations of certain sections of statutes regulating air, water, toxic waste, endangered species, mining, noise, the outer continental shelf, and more. (43) Under many statutes, the remedies available to the citizen are equivalent to those granted to the federal agency charged with administering the statute. (44)

The basic citizen suit provision permits any "person" (including an individual, organization, or corporation) to sue any other "person" (including the United States) who is violating the requirements of the given Act. Before filing suit, a citizen must notify state and federal agencies as well as the alleged violator that a lawsuit is impending. This notice provision serves an important purpose, because the threat of a citizen suit often prompts the violator to halt its violations, or at least to negotiate with the potential plaintiff. As long as the violation continues and the state or federal government is not pursuing a "diligent enforcement" action against the alleged violator in court, a lawsuit may be filed. Once the suit is filed, the government has no power to dismiss it, and may affect the outcome only by intervening in the case.

If the citizen wins, the court may order the defendant to stop the violating activities. In certain circumstances, the court costs and attorney fees associated with bringing the action may be awarded to the plaintiff. Some statutes allow the plaintiff to ask the court to impose civil penalties upon the violator, payable to the U.S. Treasury. (45)

2.3.2.2 Common Law or Civil Code Suits

Even in the absence of mechanisms for enforcing specific environmental controls set forth in a system of statutes and regulations, citizens can still achieve environmental protection objectives in the courts. Both common law systems such as that in the United States and the civil code systems that prevail in many other countries provide latitude for judicially-developed methods of remedying environmental harms. Under these systems, environmental controls are not enshrined in statutory or regulatory standards, but are developed on a case-by-case basis by courts applying general legal principles to the facts of each lawsuit. A receptive judiciary can employ the flexibility inherent in such systems both to offer citizens redress for environmental degradation that injures them individually and to correct harms to public environmental interests.

2.3.2.2.1 Common Law Suits

Prior to the adoption of recent environmental statutes in the United States, the only way in which a private citizen could prevent environmental harm through the courts was by exercising his or her rights under common law. These rights are based on precedents set during centuries of case-by-case adjudication in Great Britain and the U.S. They allow individuals to counteract harms caused by the behavior of others by seeking compensation for those harms and/or obtaining a court order halting the offending behavior. Even with the advent of statutory citizen

suit provisions, common law causes of action continue to provide an important mechanism for achieving environmental protection goals.

Most common law environmental claims require some injury or threat of injury to the plaintiff's person or property. The most common "environmental" common law action is that of private nuisance. A person suffering a "substantial and unreasonable interference with the use and enjoyment of an interest in land" can bring a private nuisance suit. For example, a property owner could sue a neighboring factory for emitting dangerous or even annoying fumes that permeated his or her property. Another common law claim for injury to property is trespass, which requires an actual physical invasion of the property's limits. A fuel storage facility whose tanks leaked oil that flowed into a neighbor's fish pond might be liable to the pond-owner in a trespass suit.

Common law actions can compensate for injury to one's person as well. For example, someone who lives near a toxic waste dumping site, and who becomes sick from fumes emanating from the site, may be able to sue the owner of the site on the basis of that injury. If the plaintiff joins together in one lawsuit with other citizens living near the site who have suffered the same damage, the resulting "class action" lawsuit can have a significant effect on the polluter's behavior.

The potential strength of such common law suits as a weapon in the environmental enforcement arsenal stems from the financial costs they can impose on a violator. Common law claims are the only avenues through which individuals can recover for damage to themselves or their personal property. And damages awarded in such suits in the U.S. can be substantial. For example, a potential court judgment for personal injury resulting from toxic pollution could include compensation for medical expenses, lost wages, and diminished earning capacity. Damages in a common law suit involving a newborn baby who will be permanently disabled by injuries caused by the defendant's polluting activities could easily amount to millions of dollars. (46) The threat of a sizeable award of damages can substantially strengthen a citizen's power to trigger compliance -- it can deter potentially polluting activities and force industry to pay attention to citizens' claims.

The common law actions described are aimed primarily at correcting violations of individual rights. By fining a defendant for such violations, or by ordering a halt to the offending activity, they can lead to broader environmental benefits as well. The common law also provides mechanisms through which citizens can vindicate public, rather than private, rights. These doctrines generally require that the plaintiff share some personal stake in the "public" goal pursued in the suit; moreover, they do not allow the plaintiff to recover money damages from the defendant unless the plaintiff has suffered injury to his or her person or property. Nonetheless, the doctrines of public nuisance, public trust, and certain broad statutory mandates reveal some of the possibilities inherent in the flexibility of judge-made law.

Public nuisance involves interference with public rights such as the right to health, safety, or comfort. Traditionally, only the government could sue to protect these rights. Recent developments, however, allow suits by individuals who suffer "special injury" different in kind from that suffered by the rest of the public. (47) A second common law action that recognizes communal rights is known as the "public trust" doctrine. This doctrine posits that the government must hold public lands and natural resources in trust for the use and enjoyment of the citizens. If the government fails to consider this trust in its management and maintenance of resources like navigable waters, fisheries, or parklands, individual citizens may sue those in control of the lands. (48) While the doctrine is, at first glance, not applicable to privately-owned land, some state and federal courts have hinted that a regulatory or contractual link between the landowner and the government may be enough to bring the doctrine into play and to render the landowner liable for environmental harms. (49)

Finally, some U.S. states have explicitly recognized public rights to environmental quality in their statutes and constitutions. Most constitutional provisions have been ineffective, because they do not permit citizens to sue for the violation of their constitutional environmental rights. Michigan's unique Environmental Protection Act, adopted in 1970, has been more successful. The Act permits any person to sue any other person "for the protection of the air, water and other natural resources and the public trust therein from pollution, impairment or destruction." (50)

It grants courts broad powers of review of both individual and agency actions, and permits orders altering or halting the harmful activities unless there is no "feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare." Michigan courts have interpreted the Act as conferring upon them the responsibility of creating "the equivalent of an environmental common law." (51)

2.3.2.2.2 Civil Law Suits

Civil code countries also offer judicially developed remedies for environmental harms. In civil code countries, standards governing environmental quality are codified, and judicial precedent is not as important as it is in common law systems. At the same time, however, code provisions relevant to environmental quality are usually general in nature, and thus are open to interpretation by judges applying the provisions in particular cases.

Most civil code standards that can protect environmental quality are similar to those available under common law, especially those actions preventing or recovering for harm to property or person. (52) Many civil codes also contain provisions that appear to go further than the common law in granting individuals the right to enforce public environmental interests. For example, Hungary's code allows individuals to sue others for violating an obligation not to behave so as to disturb others needlessly, "especially neighbors." The "neighborhood" encompassed by this provision is not restricted to property immediately adjoining the site of the polluting activity, but includes anyone affected by the pollution. (53)

In Colombia, the civil code provides for "popular actions," which permit citizens to sue for damages to communal environmental rights. (54) And in Argentina, courts have made use of a constitutional guarantee called *amparo*, which can be loosely translated as "protection," to defend individual or collective environmental rights derived from statutes, international treaties, or the constitution itself. (55)

3 THE STRUCTURE AND FUNCTION OF COURT ACCESS MECHANISMS

The court actions described above can be potent methods of achieving environmental compliance. They may not be appropriate in every case, however. For one thing, going to court will not always be a feasible option. Mounting a private lawsuit is a costly undertaking. It will probably require hiring an attorney, paying court filing and transcription fees, generating and duplicating legal briefs and other documents, and conducting extensive discovery to assemble the facts necessary to prove one's case. These efforts may exceed the capability of a private citizen.

Frequent recourse to litigation as a method of achieving environmental compliance can pose societal disadvantages as well. Some commentators in the United States have complained that public interest lawsuits create a logjam in the courts and strain overtaxed judicial resources with frivolous or peripheral claims. Others claim that promoting litigation as a preferred alternative for citizen involvement in environmental enforcement creates an atmosphere of adversarial hostility that may discourage future cooperation.

Despite these potential limitations, the ability of citizens to obtain judicial relief from environmental harms can be a valuable enforcement tool. First, citizen access to court remedies improves the quality and fairness of the enforcement process. Allowing citizens into court helps to guarantee that other important players in the political system -- such as industry and government -- will give citizen viewpoints their due. Without such a guarantee, the voices of citizens advocating environmental protection may be drowned out. For example, a large business engaging in polluting activities may be inclined to disregard the views of local citizens who want to impose pollution curbs. The government, in turn, might give citizen comments during regulatory proceedings less weight than those of industry, whose lobbyists may be more vocal and well-financed and who may have developed ties to the regulators.

Citizen suits can serve as the microphone that helps citizen views to be heard. Before the court, all litigants are equally deserving of a fair hearing in each case. A citizen with access to a court action can invoke the power of the judiciary in the service of her cause. The availability of

an enforcement suit enables individuals and organized citizen groups to secure treatment as equals by government and industry. Opening the courthouse door to citizens thus promotes the rule of law over the rule of politics and advances the common goal of environmental protection.

Enabling citizens to implement environmental protection objectives in the courts also reinforces other forms of citizen participation in environmental enforcement. For example, citizens may prefer to focus primarily on participation in government regulatory or permitting processes in the ways discussed in Section 2.2.1 above. The knowledge that citizens can challenge the government's outcome in court may increase the agency's attentiveness to such comments and enhance the usefulness of the public's efforts. Ensuring that citizens will be heeded increases the value of their message, whatever mechanism they may choose to convey it.

Finally, allowing citizens to sue can have concrete effects on a society's progress towards implementing environmental controls. Actual litigation need not even occur in order to achieve this result. The very possibility of an enforcement suit against a violator may be sufficient to trigger compliance, influence industry to enter into a negotiated agreement with the citizens, or otherwise induce a polluter to alter his behavior, thus obviating the need to sue at all. Experience in the U.S. with citizen suit provisions has revealed that the mere notification to a violator that a citizen intends to sue often prompts the potential defendant to cease the violations.

3.1 Why Sue?

Whether a citizen will need to have recourse to the courts, and if so, through what mechanism, will depend on what that citizen hopes to achieve. For example, a citizen may be motivated to respond to environmental harms by seeking money for herself or for the government. The citizen may want the government to take some sort of regulatory action. Or she may simply want to put a halt to the polluting activity.

Given the cost and effort involved in bringing suit, citizens may prefer to explore other methods of attaining their objectives. For example, a civic group targeting permit violations by a local industrial water polluter might first try to induce voluntary compliance by confronting the polluter directly. If that effort did not succeed, the group could approach the local media with information it had collected about the violations, hoping to embarrass the polluter into compliance. An alternative step might involve forwarding evidence to the government for enforcement action.

If these various approaches were not successful, the civic group could file a court complaint against the polluter under an environmental statute containing a citizen suit provision. Even that course of action might well stop short of a trial or other judicially determined outcome. Merely notifying a polluter or a government regulator that a lawsuit is impending, as most citizen suit provisions require, often triggers "voluntary" compliance by the polluter or regulatory or enforcement action by the government. The prospect of court action may also prompt the parties to settle the case between themselves rather than engaging in expensive and time-consuming litigation. Settlement substitutes a definite, certain result for the unpredictable risks of a trial. (56) In the United States, litigants have found this trade-off appealing: over 90 percent of the lawsuits filed in the United States are resolved without a trial. (57)

3.2 What Kind of Lawsuit to File?

The objective of a potential citizen plaintiff -- the legal "remedy" the plaintiff desires to obtain -- will determine both the range of available litigation strategies and the way in which the case will proceed. A political system is likely to impose controls on a citizen's access to remedies that will vary with the nature of the remedy itself. The structure imposed by the government, in turn, will influence the citizens' enforcement strategies. This section surveys the various methods in which a citizen may be able to achieve a particular enforcement goal.

3.2.1 Lawsuits to Obtain Money Damages

3.2.1.1 The Nature of the Remedy

One goal of a citizen lawsuit might be financial compensation to the citizen for environmental harm caused by a polluter. It may be appropriate to set relatively strict limits on the ability of a plaintiff to obtain such compensation. Those responsible for designing and implementing a system of judicial enforcement may decide that financial benefits should only accrue to someone who has actually suffered from the complained-of harm.

In the United States, for example, a litigant seeking money damages for environmental harms is limited to the common law causes of action described above in Section 2.3.2.2.1, which generally require an actual injury to the plaintiff's person or property. The U.S. government has chosen not to supplement that avenue with a statutory damages remedy. Because citizen suits under environmental statutes are designed to vindicate public rather than private rights, they do not allow plaintiffs to recover any personal damages for violations of environmental laws and regulations. (58)

3.2.1.2 The Elements of the Case and the Method of Proof

In order to win damages in a suit at common law, a plaintiff is required to establish several elements. The plaintiff must prove that the defendant has violated an expected standard of conduct -- by intentionally or negligently acting in a manner likely to result in harm, for example. The plaintiff must also establish that the defendant's behavior has caused actual damage to the plaintiff. This element of causation can be especially difficult to prove. In the case of injury to health resulting from toxic pollution, a plaintiff may have to supply scientific evidence and analysis establishing a physical link between the particular polluting activity and the harm. The long latency period that may intervene between a release of toxic substances and the manifestation of a resulting injury contributes to the difficulty of proving this element. (59)

In a private nuisance lawsuit, a plaintiff would also be required to establish that the harm resulting from the defendant's conduct outweighs the social utility of the polluting activity. This too can be a heavy burden, because it may force the court to weigh the plaintiff's right to grow crops that are free from pollution damage against the community's desire to retain the jobs created by the defendant's polluting factory.

In some instances, a system of government might conclude, the public interest warrants reducing the burden of proof on a plaintiff seeking financial compensation for harms caused by polluting activities. In the United States, courts responsible for developing and interpreting the common law have made several such adjustments. One example is the creation of different rules of liability for what courts have determined are "abnormally dangerous activities," such as the transportation of hazardous waste. Courts have concluded that the defendant conducting abnormally dangerous activities has voluntarily taken on the risk of causing harm to others. The defendant thus should be "strictly liable" for the resulting damage, even when the defendant's actions were not negligent or intentional.

Judicial rules can also lessen a plaintiff's burden of proving the causation element of a common law damages case. For example, a judicially established presumption that certain kinds of polluting activity cause certain kinds of physical damage might allow a plaintiff to recover without proving conclusively that the defendant's practice was the actual cause of her injury. (60)

The existence of statutory or regulatory environmental standards can assist a plaintiff as well. Federal or state statutes regulating toxic chemicals may serve as evidence of the chemicals' toxicity. In addition, violation of the regulatory requirements can demonstrate negligence on the part of the defendant. Similarly, "right-to-know" laws often require companies to reveal to workers and communities the dangers associated with any toxic chemicals that the companies store, use, or release. A judge may conclude that this statutory reporting requirement assigns to the defendant a duty to warn the plaintiff of known hazards, and that violation of the requirement breaches that duty. (61) Environmental standards enacted by the legislature and refined by administrative agencies can thus influence the development of judge-made law.

3.2.2 Lawsuits to Halt Violations

3.2.2.1 The Nature of the Remedy

A plaintiff whose desired remedy is a court order requiring a polluter to stop the polluting activities may be offered more avenues for judicial relief and may face fewer hurdles to recovery. In the United States, this form of remedy is termed an injunction. It is the most likely outcome of a successful suit to enforce public rights, either under the common law or under an environmental statute. An order barring or otherwise limiting future environmentally harmful activity may also be the outcome of an environmentally-based suit in a civil code system.

3.2.2.2 The Elements of the Case and the Method of Proof

Injunctive relief may be sought in an action at common law to enforce either private or public rights. In such a case, liability will be established in the manner discussed in Section 3.2.1 above. A citizen can also seek an injunction by suing under an environmental statute that contains a citizen suit provision.

In cases in which the citizen is acting as the enforcer of a federal statute by asking a court to prohibit behavior that violates the statute's terms, the citizen's burden of proof in court may be lighter than that required in a common law action for damages. In most cases, the citizen may need to prove only that certain statutory or regulatory controls or limitations are in force and that the defendant has failed to adhere to them. (62) In actions brought to enforce statutes that require regulated entities to report regularly to the government on their regulated activities, such as the U.S. Clean Water Act, proof might consist simply of the defendant's own reports. These reports may reveal violations of applicable emission limits or permit conditions.

In establishing the requirements governing the conduct of a statutory citizen suit, a government may want to ensure that citizen suits encourage, rather than impede, both voluntary compliance and government enforcement efforts. Therefore, most citizen suit provisions in U.S. environmental statutes contain notice requirements and "diligent prosecution" limitations.

Before a citizen suit may be filed under a U.S. environmental statute, advance notice of up to 120 days must be given both to the alleged violator and to state and federal environmental officials. (63) The notice to the alleged violator allows it to examine its own record, to enter negotiations for settlement, or to come into compliance before being faced with the legal requirements that come with the filing of a lawsuit. If the defendant halts the offending actions upon receipt of notice, then the plaintiff may no longer file the lawsuit.

The notice provision also places some check on the ability of citizens to bring suit. If state or federal agencies would rather prosecute the violation themselves, the notice allows them an opportunity to do so, thereby preventing the citizen from filing suit. The statutes prohibit citizens from filing enforcement suits if the government is "diligently prosecuting" a case against the alleged violator. (64)

Once the citizen plaintiff has proved a violation of law, she must still establish her entitlement to injunctive relief. Traditionally in the United States, a court asked to issue an injunction must first balance the plaintiff's need for the injunction, the harm the injunction might cause the defendant, and the effect of the injunction on the public interest. The outcome of this balancing process is likely to depend on the nature of the right the plaintiff is seeking to enforce.

In a lawsuit brought to enforce an environmental protection statute, the very enactment of the statute supplies a presumed public interest in environmental protection. In addition, the remedy requested confers a public, not a private, benefit. Indeed, some U.S. plaintiffs have argued that if an environmental statute is violated, a court *must* issue an injunction. (65) The present consensus, however, is that most U.S. statutes merely require that a court bring about compliance, and endow the court with the discretion to select the appropriate method of achieving that goal. (66) This process often involves a judicial balancing of the private interests involved, but with an overall eye to the public interest in preventing environmental damage. For

example, a judge might not close down a polluter on the basis of a minor permit violation, but might rather impose on the violator a deadline for attaining compliance.

A similar application of the balancing approach is likely in a common law suit to enforce a public right, such as a suit based on public nuisance or the public trust doctrine. Injunctive relief is also available in a common law cause of action brought to redress a private environmental injury, such as a private nuisance suit. However, because there is no presumed public interest in the outcome of such an action, and because a private common law action is brought for the personal benefit of the plaintiff rather than in the public interest, it may be difficult for a private common law plaintiff to obtain injunctive relief. Instead, a court may decide that an award of damages adequately compensates the plaintiff for any injury sustained. (67)

3.2.3 Citizen Enforcement Suits Seeking Civil Penalties

3.2.3.1 The Nature of the Remedy

Another potential remedy that can shape the course of litigation is the imposition of monetary penalties on a violator. These penalties, payable to the government, are designed to punish the violator, to eliminate any profit earned by the violator due to the polluting activities, and to compensate for the environmental harms caused by the violator's actions. (68) The imposition of monetary penalties has traditionally been reserved for government enforcement agencies. In the United States, however, a limited number of environmental statutes contain provisions allowing citizens to seek civil penalties in suits brought to enforce the statutes. Because this remedy provides a public benefit, it is not an available remedy in U.S. common law actions. In statutory enforcement lawsuits, the requisite cause of action and burden of proof for recovery of civil penalties are the same as for other statutory citizen suit remedies.

The U.S. Clean Water Act and Resource Conservation and Recovery Act have included civil penalty provisions in their citizen suit clauses for several years, and a similar provision was added to the Clean Air Act in 1990. (69) While the United States government can request civil penalties under many other statutes, (70) only these three acts also permit citizens to request that the penalties be assigned. In some environmental laws these statutory penalties can amount to $25,000 per day, per violation. (71)

By permitting individual plaintiffs to request civil penalties ranging into the millions of dollars, the citizen suit provisions have granted the public significant power over alleged violators. This power has caused heated debate in the United States. Supporters argue that plaintiffs will initiate suits only if they have enforcement powers equivalent to those of the government. The ability of citizens to seek civil penalties can improve their bargaining position in settlement negotiations, and may increase the overall success of citizen enforcement programs. Permitting civil penalties in citizen suits also equalizes the enforcement powers of government and the citizen. This equality ensures some consistency in enforcement practices, treats violators equally, and prevents violators from evading full enforcement by "shopping" for citizen rather than government enforcement actions.

Those who oppose allowing citizens to request civil penalties claim that conferring this power on citizens invites abuse and threatens to undermine the traditional structure of government. In the view of these critics, suits for civil penalties serve the national interest in law enforcement, an interest traditionally confided to the jurisdiction of the executive branch of government. Assignment of the power to exact civil penalties to anyone other than an executive branch official thus arguably violates the constitutionally-established balance of powers among the branches of the federal government. (72)

In several citizen suit settlement agreements under the Clean Water Act, the alleged violators have avoided the infliction of civil penalties by instead paying a sum of money to a third party environmental organization or to an otherwise environmentally beneficial project. For the parties, these are win-win arrangements. The defendant pays less than it might have had to in civil penalties, and the citizen plaintiff (or environmental organization) benefits indirectly through the payment of funds to a "public interest" organization.

To critics, these "environmentally beneficial expenditures" suggest extortion, draw funds away from the U.S. Treasury, and diminish the overall level of environmental enforcement. (73) The federal government has looked upon settlements involving third-party payments with some suspicion, and carefully examines consent decrees containing payments to environmental organizations. However, courts have upheld consent decrees containing such payments. (74)

"Environmentally beneficial expenditures" have the potential to aid in achieving environmental compliance. The availability of such third party payments may encourage defendants to enter into settlement agreements. Because these payments can be characterized as "voluntary," in contrast to the coercive and punitive aspect of civil penalties, they may be relatively palatable to defendants. On a symbolic level, an agreement to pay environmentally beneficial expenditures does not brand the contributor as a guilty party as civil penalty payments might. Such expenditures offer financial advantages as well: Unlike civil penalties, they may be tax-deductible as business expenses. (75)

Civil penalty assessments have had an important effect on the number and effectiveness of citizen suits in the United States. The ability to request civil penalties improves the citizen's bargaining position. It offers citizen plaintiffs a simple means of punishing and deterring future violators. As suggested by the large number of citizen enforcement cases under the Clean Water Act, these effects, in combination with clear standards and self-reporting requirements, make the civil penalty provisions a significant incentive to bring citizen suits. (76)

3.2.4 Suits to Influence Government Action

3.2.4.1 The Nature of the Remedy

Finally, the remedy a citizen litigant may desire is the accomplishment of a particular regulatory action by the government. The plaintiff may hope to force the agency to perform a task the legislature has assigned to it. In such cases, barriers to suit will likely be minimal, because the private party is simply forcing the agency to initiate an action the legislature has already endorsed, not attempting to dictate the way in which the action should be carried out or the action's end result.

3.2.4.2 The Elements of the Case and the Method of Proof

In the United States, a litigant seeking to trigger a non-discretionary agency action will need to establish only the existence of a statutory duty and the agency's failure to perform that duty. (77) In cases in which the litigant is attempting to influence the content of agency action, however, more deference to the agency's presumed regulatory expertise may be warranted. In practical terms, this deference will be carried out through the standard of review a court employs in assessing the challenged agency action. As discussed in Section 2.3.1.2 above, it is likely that a U.S. plaintiff taking issue with discretionary agency action will have to convince a court that the action was "arbitrary and capricious" -- a standard difficult to meet. Even though judicial review of substantive agency action does not often succeed in overturning an agency's result, it may force the agency to be more careful about the procedures it employs in reaching that result.

3.3 Who Should Be the Parties to the Suit?

An important consideration for a political system setting up and administering methods for citizens to enforce environmental standards in the courts is the identities of the appropriate plaintiffs and defendants. A society may want to ensure that a plaintiff who is asserting a public environmental right will represent that public interest fairly and thoroughly, or that the judicial branch does not engage in legislative policymaking by deciding cases in which no real injury has been suffered. In addition, a society may want to make a policy decision about the range of

freedom granted to the government in its non-regulatory activities. And as a potential defendant, the government may want to control the instances in which it can be sued.

3.3.1 Plaintiffs and the Issue of "Standing"

In the United States, courts have limited the category of plaintiffs eligible to enforce environmental controls by requiring that the plaintiff possess "standing" to bring the suit. The standing requirement stems both from the U.S. Constitution and from judicial interpretation of environmental statutes containing citizen suit provisions. Under the constitution, as interpreted by the Supreme Court, plaintiffs bringing a lawsuit must allege that: (1) they have been or will be injured by the actions or threatened actions of the defendant; (2) the injury is traceable to the challenged action; and (3) the harm alleged is likely to be redressed by a favorable decision. (78) These requirements are supposed to ensure that the judiciary engages only in redressing actual wrongs, not in the policymaking activities that the constitution entrusts to the legislative branch. (79) Traditionally, this standard required an economic injury. For example, if the stream running past an outdoor cafe becomes polluted by an upstream paper mill, driving away patrons, the cafe-owner would have standing to sue the mill-owner. (80)

Over the years in the U.S., changing attitudes, the scope of environmental regulation, and broad citizen suit provisions have altered the contours of this standing test. During the inception of the environmental citizen suit movement in the 1970s, courts found even a plaintiff's allegation of occasional or anticipated aesthetic injury sufficient to confer standing. (81) For example, a plaintiff might have alleged successfully that her view of a national park she had visited and planned to visit again was being impaired by emissions from a regional power plant.

However, more recently, the constitutional standing test has been rendered more stringent by courts concerned with reducing the amount of public interest environmental litigation. In its latest treatment of the issue, the Supreme Court found that citizen plaintiffs lacked standing to challenge a regulatory action even when they alleged an injury very similar to the kinds of injuries the Court had found sufficient just twenty years earlier. Even the fact that Congress had expressly authorized citizen suits under the statute in question did not alter the outcome. (82) The essential ambiguity of the constitutional standing principle renders it susceptible to such restrictive judicial interpretations, and has allowed this requirement to become a major impediment to citizen enforcement suits in the United States.

The second element of standing in the United States applies only to citizen lawsuits based on statutory, rather than common law, causes of action. Traditionally, only the U.S. government could bring a lawsuit to vindicate public rights vested in the population as a whole. Through citizen suit provisions, the U.S. Congress has chosen to extend this right to individuals. Courts have attempted to ensure that citizens empowered to sue in this manner are effective advocates for these public rights by requiring that any injury claimed by the plaintiff be within the "zone of interests" of the statute in question. (83) This limits potential environmental enforcement plaintiffs to those who base their standing on environmental injury. Thus, one cement factory might not be allowed to sue another that was violating emission standards by claiming that the violations allowed unfair competition -- the Clean Air Act's zone of interest is air quality, not levels of competition. (84)

Other countries, however, have not deemed it necessary to restrict public access to the courts for plaintiffs seeking to redress public environmental harms. For example, in Argentina, an environmental lawyer was allowed to challenge certain licenses granted by the federal government to two Japanese corporations. The licenses allowed the corporations to capture and export fourteen dolphins from the South Atlantic Ocean, off the coast of the Argentine province of Chubut. The court concluded that the plaintiff's individual right to the protection of the ecology, as expressed or implied by several constitutional and statutory provisions, entitled the plaintiff to challenge the licenses in court. (85) The court invalidated the licenses, on the grounds that the government had not examined the environmental impact of the captures, that past licenses had resulted in the death of the captured animals, and that the licenses had been granted over the opposition of the provincial government.

3.3.2 Defendants and "Sovereign Immunity"

Implementation of an environmental enforcement regime will often necessitate bringing lawsuits against the government, either in its regulatory or in its proprietary capacity. As a regulator, the government may be the target of a suit designed to prompt or to challenge its implementation of statutory objectives. As an owner of property, the government also engages in activities that may pollute the environment. For example, the government may operate research laboratories or maintenance facilities at which hazardous wastes have been stored. (86) In post-communist regimes in Central and Eastern Europe, where up to 90% of all property is in government hands, the vast majority of all pollution will be traceable to government action. (87) Unless enforcement actions can be brought against the government, environmental protection goals can never be fully achieved.

Yet the government often restricts its own liability in court. In the United States, for example, the doctrine of "sovereign immunity" generally prevents citizens from suing the government unless the government has explicitly waived that exemption. Such a waiver is found in several environmental statutes authorizing citizen enforcement suits. A citizen suit under such a statute offers a private plaintiff a unique opportunity to ensure government compliance with its own rules and regulations. (88) For citizens to participate fully in the environmental protection process, the government will need to render itself accountable in court for the environmental effects of its operations.

3.4 How Will the Suit Be Financed?

The previous discussions outline the ways in which court actions can be used to accomplish particular enforcement goals. Even the most impressive array of such litigation options is useless, however, if citizens cannot afford to go to court. The single most important factor in encouraging citizen suits may thus be the ability of citizens to recover court costs and attorney fees following the successful prosecution of a citizen suit. On budgets even more limited than those of state and federal governments, few citizens could take on the role of private attorney general if environmental statutes did not contain "fee-switching" provisions.

In the United States, the traditional "American rule" requires that each party pay its own court costs and attorney fees regardless of who wins the lawsuit. In contrast, many other nations require that the losing side pay both sides' costs and fees (the "British system"). Both systems act as a significant deterrent to citizen enforcement suits that are brought for the public, rather than private interest. Why should an individual bring a suit which, if won, will offer only a diffuse sense of goodwill from the vindication of the public interest, and if lost, require the litigant to shoulder the cost of his own and perhaps (under the British system) the defendant's legal fees? Because of this disparity between private costs and public benefits, there is a strong argument for altering the traditional rule in citizen suits brought under environmental protection statutes. (89)

Under the U.S. environmental citizen suit provisions, for example, a successful plaintiff may request that the losing defendant pay both parties' court costs and attorney fees. To discourage frivolous suits, the environmental statutes permit judges to assess the costs and fees of the defendant against a plaintiff who has engaged in litigation that is clearly unfounded in law or fact. Some risk to the plaintiff still exists. The plaintiff might lose the case and be forced to shoulder his or her own expenses, or the suit could be deemed frivolous and the citizen could be forced to pay the costs of both sides. However, by selecting the most meritorious and winnable cases, environmental plaintiffs can minimize these risks and maximize the chance of recovering their own financial outlays.

In some cases, these "fee shifting" provisions allow plaintiffs to recover more than the lawsuit actually cost. Because courts calculate attorney fees using the "market price" for environmental attorneys, but most environmental plaintiffs' attorneys work for well below that price, the final fee award can be more than the plaintiff actually spent to bring the suit. What results is a windfall -- or at least an amount better than break-even -- for a winning plaintiff. Successful citizen suit plaintiffs -- particularly environmental organizations -- can channel any

excess attorney fee funds into bringing other lawsuits. The profits from past wins finance future litigation risks and enable environmental organizations to maintain a series of citizen suits with less outside financial assistance than they would otherwise need. (90)

4 CITIZEN INVOLVEMENT IN PRACTICE

Various practical considerations will influence both citizens' choice among the enforcement mechanisms discussed in this paper and their ability to employ those mechanisms effectively. Both a government considering how citizen participation might fit into an overall environmental enforcement system and the public employing that system once it is set up will need to be informed of and sensitive to those considerations.

4.1 A Citizen's Choice of Mechanisms for Participation

A citizen's choice of how to participate will vary with several factors. The most basic is the citizen's own motivation. Is the problem to be addressed a lack of applicable standards -- possibly calling for an agency-forcing suit -- or a perceived failure on the part of the government to act against violators -- which may be a candidate for a citizen enforcing suit? A second factor is the role of the government in the enforcement system. Obviously, if the government is actively proceeding against violators, there will be little room for citizen enforcement lawsuits, especially in a system, such as that in the U.S., in which diligent government prosecution prevents private actions. In such a situation, a citizen might choose to focus on assisting the government in its enforcement efforts by engaging in private monitoring or other information-gathering activities.

The identity of the citizen -- or the environmental organization -- who wants to participate in environmental enforcement is also relevant. For example, industry entities who want to alert authorities to permit violations by particular competitors may choose a different enforcement mechanism than would a citizen group targeting industry-wide violations. Another important variable is the resources available to the individual or entity. A single citizen with no financial backing may be limited to volunteering his time to monitor compliance, while a large public interest organization might be able to finance a large-scale lawsuit. Even a public interest organization may choose to minimize litigation costs by filing suit only in cases involving clear-cut violations of demonstrable standards, while leaving more complicated situations to the government.

The possibility of combining two or more of these avenues may also influence citizen involvement in practice. For example, a private action for damages can be brought concurrently with a citizen enforcement suit; the damages action may serve as leverage to effectuate a settlement on the defendant's part. Agency-forcing judicial review suits brought by citizens can help spur the development of clear and enforceable regulations, indirectly aiding direct enforcement efforts. (91)

One of the best examples of the potential for citizen action in environmental enforcement has been the U.S. experience with the Surface Mining Control and Reclamation Act of 1977 (SMCRA). (92) Although states, federal agencies, and industry all resisted implementation of SMCRA, citizens were able, through the use of a variety of methods, to make the Act a useful and effective tool for environmental protection. For example, when SMCRA's regulatory agency rewrote and weakened the statute's implementing regulations in the early 1980s, citizens challenged the agency's actions in court. The resulting victories included limiting the number and scope of exceptions to the Act's standards and strengthening regulations governing mining in national forests.

In addition to challenging agency regulations, citizen plaintiffs also sued state and federal agencies for failing to conduct required investigations, neglecting to collect fines under the statute, and declining to carry out state implementation programs. Several of these lawsuits resulted in settlement agreements or court-ordered remedies that not only directed the agencies to fulfill their statutory responsibilities, but made structural changes in the way the agencies enforced the statutes. Finally, citizens worked closely with state and federal agencies as the agencies

developed the new enforcement and implementation techniques required as a result of the citizen litigation. This broad range of public involvement improved the enforcement of SMCRA by increasing both the capability and the desire of the agencies to implement the statute effectively.

4.2 Requirements for Effective Citizen Enforcement

Citizen participation in environmental enforcement cannot fully succeed without support from other institutions within the environmental protection system.

4.2.1 A Sound Legal Framework

For citizen participation to be truly effective, the system of environmental regulation must provide the mechanisms to accommodate and encourage it. The most obvious such accommodation -- on which this paper has focused -- is the provision of avenues allowing citizens to go to court to force agency action, challenge the results of agency government decisions, or prosecute violators. Even if these avenues are made available, citizens may be able to use them only if the law includes cost-and fee-shifting provisions like those mentioned in Section 3.4 above.

Another, less obvious, contributor to effective citizen enforcement is the establishment of clear standards of conduct against which the behavior of potential violators can be compared. When a citizen is provided with specific emission levels, deadlines for compliance, or other definite substantive requirements contained in statutes, regulations, or permits, it will be easier not only to identify but to prove the violation. Such substantive requirements are particularly effective when used in conjunction with industry self-monitoring obligations, reporting schedules, or other information access mechanisms. Clear standards can stem from statutory language, regulations developed by agencies in accordance with statutory duties, or industry-specific permits issued pursuant to the regulations.

Perhaps the most essential element in the legal framework is the existence of a judicial system that is receptive to citizen participation. On an overall level, a supportive judiciary can instill in the public a sense that their involvement is accepted and rewarded, thus increasing public confidence in the enforcement system. As a practical matter, judicial attitudes can have a concrete effect on the success or failure of environmental law suits brought by citizens. Through threshhold rulings restrictive of citizen standing, for example, judges can effectively bar the courthouse door to citizen litigants. The extent of judicial damage awards and the content of injunctive relief also influence the likelihood that citizens will choose to sue in the future and the kind of cases citizens may bring.

Legal controls provide both the overall framework within which environmental protection goals can be articulated and a powerful incentive encouraging the achievement of those goals. A strong legal system thus helps citizens to participate effectively in environmental enforcement through non-court mechanisms as well as in the courts.

4.2.2 Adequate Citizen Resources

A second important requirement for effective citizen enforcement is a citizenry with the knowledge and confidence to avail itself of its various options for participating in environmental enforcement. As an initial matter, particularly in societies unused to citizen participation, some effort may be necessary to educate the public about those options and how to use them. Both government and environmental organizations could sponsor such a public education program.

Environmental organizations can play a crucial role in other ways as well. Because the costs of prosecuting citizen suits or monitoring industries on a regular basis are so high, individuals act on their own only rarely, particularly in court cases. (93) More often than not, environmental organizations or "public interest law firms" are the only actors with the resources and expertise to pursue citizen suits and many other associated enforcement actions. (94)

Providing some form of incentives -- whether financial or otherwise -- for citizens to participate in environmental enforcement could encourage and enable individuals and small local groups, as well as large-scale organizations, to increase their involvement. One possibility would

be for the government to support citizen monitoring and inspection efforts either through direct funding or by cloaking private citizens with some of its own power to impose limited fines for clear-cut violations. For example, if the government wanted to avail itself of citizen manpower to patrol national parks to prevent littering, careless setting of fires, or other infractions, it could deputize citizens to act as private forest rangers, who could issue citations to violators. The Polish government has recently established such a program. (95) Another option might be for the government to subsidize citizen environmental enforcement litigation directly. One Australian territory has encouraged citizen suits by directly subsidizing them through legal assistance. (96)

Industry cooperation with private monitoring efforts could be encouraged by either publicizing the value of such efforts or subsidizing them by allowing a tax deduction for the costs of the program. Finally, statutory fee and cost-shifting provisions can give citizens the financial capability to initiate their own enforcement actions.

4.2.3 Accessible Information

Almost all of the citizen involvement in environmental enforcement discussed above would be impossible if citizens did not have ready access to information about potential violations. One invaluable source for such information is data on pollution levels supplied by polluters themselves, as part of a regulatory self-monitoring and reporting regime. It is difficult to overstate the importance of such reports in not only initiating suits, but also giving citizens the capability to win them. (97)

In the U.S., the Clean Water Act's requirement that the holders of permits to discharge effluents from point sources submit regular Discharge Monitoring Reports (DMRs) to the government is perhaps the best example of a regulatory mechanism for creating and disseminating information that citizens can use in enforcement. (98) DMRs are often accepted by courts as definitive proof of a violation, since they are written and filed by the alleged violator itself.

Another useful information access mechanism in the U.S. is the so-called "right-to-know" statute, which requires industries storing and using certain hazardous substances to report to workers and communities on the amounts of the substances stored, used, and discharged on-site. (99) This "right-to-know" provision has helped citizens to identify and prove environmental violations.

Of course, it is essential to ensure that self-monitoring and reporting data are easily available to the public. A government-wide access-to-information provision, such as the U.S. Freedom of Information Act, can ensure that citizens are able to obtain those data, as well as other information held by the government that may be relevant to environmental enforcement efforts. The government could attempt to meet citizens halfway by not only responding to citizen requests, but affirmatively disseminating environmental data collected in the course of its regulatory duties. (100)

5 CONCLUSION

Citizen involvement is crucial to the establishment and implementation of a fair and effective environmental protection regime. As this paper has attempted to illustrate, the opportunities for -- and the benefits from -- citizen involvement are many and wide-ranging. Citizens can both supplement government enforcement efforts and encourage the government to maintain and sharpen its focus on environmental protection. Indeed, involvement by the public may be the vital ingredient necessary to transform environmental protection statutes and regulations from aspirations into reality. Policymakers setting up and implementing environmental controls can draw upon the resources of citizens to further the common goal of environmental protection by making enforcement work.

ENDNOTES

1. This triad of environmental concerns was described in S. HAYS, BEAUTY, HEALTH, & PERMANENCE: ENVIRONMENTAL POLITICS IN THE UNITED STATES 1955-1985 (1987).

2. *See* Cross, *Rethinking Environmental Citizen Suits*, 8 TEMP. ENVTL. L. & TECH. J. 55, 64-70 (1989) (discussing U.S. court cases upholding environmental regulations on the ground that the U.S. Environmental Protection Agency could prevent unduly harsh effects by making administrative exceptions in particular cases).

3. See the exchange between an environmental plaintiff's attorney and an agency representative in *Private Watchdogs: Internal Auditing and External Enforcement -- Three Perspectives*, 17 ENVTL. L. REP. (Envtl. L. Inst.) 10,255, 10,263 (1987).

4. This may be especially true in state agencies and enforcement programs, whose employees tend to be closer financially, politically, and personally to the potential violators than are federal officials. *See* Smith, *The Viability of Citizen Suits under the Clean Water Act after* Gwaltney, 40 CASE W. RES. L. REV. 1, 55-56 (1989-90).

5. *See* ENVIRONMENTAL L. INST., AN ANALYSIS OF CITIZEN ENFORCEMENT ACTIONS UNDER EPA-ADMINISTERED STATUTES V-11 to V-12 (Sept. 1984) [hereinafter ELI STUDY].

6. *See* Webb, *Taking Matters into Their Own Hands: The Role of Citizens in Canadian Pollution Control Enforcement*, 36 MCGILL L.J. 770, 819 (1991) (discussing how private prosecutions in Canada clearly illuminate the unfairness and incoherence of current enforcement activities).

7. In the United States, government agencies have expressed appreciation for citizen enforcement efforts. *See* Chesapeake Bay Foundation v. Bethlehem Steel Co., 652 F. Supp. 620, 625 (D. Md. 1987) (citing Brief of the U.S. as *amicus curiae* in support of the Clean Water Act at 1-2, Student Public Interest Research Group v. Monsanto, 600 F. Supp. 1474 (D.N.J. 1985) (indicating that the EPA Administrator enthusiastically supported the role of citizens in enforcement proceedings)); ELI STUDY, *supra* note 5, at V-7; L. JORGENSON & J. KIMMEL, ENVIRONMENTAL CITIZEN SUITS: CONFRONTING THE CORPORATION -- A BNA SPECIAL REPORT 17 (1988) [hereinafter BNA REPORT]; Price, *Private Enforcement of the Clean Water Act*, 1 NAT. RESOURCES & ENV'T 31, 60 (1986).

8. Many nations permit and encourage active public participation in the enforcement of environmental laws. For examples of the citizen's role in various nations, *see* Preston, *Public Enforcement of Environmental Laws in Australia*, 6 J. ENVTL. L. & LITIG. 39 (1991); Webb, *supra* note 6, at 770; PARTICIPATION AND LITIGATION RIGHTS OF ENVIRONMENTAL ASSOCIATIONS IN EUROPE (M. Führ & G. Roller eds. 1991) [hereinafter EUROPE].

9. *See* Bowman & Hunter, *Environmental Reforms in Post-Communist Central Europe: From High Hopes to Hard Reality*, 13 MICH. J. INT'L L. 301, 351 (1992).

10. Many nations rely on citizens and environmental organizations to identify and report violations -- and in some cases to pressure agencies into enforcement actions. This ability is a particularly important part of the European Community enforcement program. *See* EUROPE, *supra* note 8, at 146; Smith & Hunter, *The European Community Environmental Legal System*, 22 ENVTL. L. REP. (Envtl. L. Inst.) 10,106, 10,113 (1992). Some Central and Eastern European nations are also beginning to recognize the utility of citizen monitoring. *See* Allen, *The Polish Ecological Clubs: "Before, we could blame the communists. Now we have to have the best arguments.*", TRANSATLANTIC PERSPECTIVES (German Marshall Fund, Washington, D.C.), Spring

1992, at 10 (describing the Polish Ecological Club's environmental inventory of a polluted creek, its report to the city government, and the follow-up by the state enforcement agency).

11. *See* OFFICE OF WATER, U.S. ENVTL. PROTECTION AGENCY, NATIONAL WATER QUALITY INVENTORY: 1986 REPORT TO CONGRESS 109, 115 (1987); Smith, *supra* note 4, at 54-56.

12. *See* Steinhart, *Waterway Watchdogs*, AUDUBON, Nov. 1990, at 26.

13. Because waterways in the U.S. are state property, citizens may directly approach point sources of pollutants, or identify areas where nonpoint pollution (from fertilizers or feed lots, for example) is causing a water quality problem. As an example of the role of organized citizen groups, the Izaak Walton League of America trains citizens to monitor the health of local and regional streams. Those citizens then report information to a national clearinghouse, which notifies state or federal agencies. Although citizens volunteer for the monitoring program, personal interest is not the only motivating force: State agencies help fund the League's training and reporting programs. Telephone Interview with Loren Kellogg, National Monitoring Coordinator for the Save Our Streams Program, Izaak Walton League of America (June 8, 1992).

14. *See* J. MILLER & ENVTL. L. INST., CITIZEN SUITS: PRIVATE ENFORCEMENT OF FEDERAL POLLUTION CONTROL LAWS 133 (1987) [hereinafter CITIZEN SUITS]; K. NOLL & J. DUNCAN, INDUSTRIAL AIR POLLUTION CONTROL 36 (1975).

15. *See supra* note 13.

16. Consider the activities of the environmental organization Lighthawk, which uses private planes and pilots to monitor environmental harm from the air in the U.S. and other countries. *See* Wood, *Aerial Crusaders*, THE CHRISTIAN SCIENCE MONITOR, July 14, 1988, at 10.

17. *See* Ley 13.577 Creación de Obras Sanitarias de la Nación, art. 31 & 32 [Creation of Sanitary Work Agency]; Decreto 674/89 Regimen contra la Contaminación de Ríos Bs. As. 24/V/89 [River Pollution Regime]. The U.S. Surface Mining Control and Reclamation Act of 1977 contains a similar provision. *See* 30 U.S.C. § 1271(a)(1) (1988).

18. *See* CITIZEN SUITS, *supra* note 14, at 134.

19. The U.S. Federal Water Pollution Control (Clean Water) Act requires holders of permits allowing discharge of pollutants into the water to submit regular "Discharge Monitoring Reports." *See* 33 U.S.C. § 1318 (1988). The U.S. Emergency Planning and Community Right-to-Know Act (EPCRA), 42 U.S.C.A. §§ 11001-11050 (West 1983 & Supp. 1992), imposes extensive self-monitoring and reporting requirements on certain industries that use and release extremely hazardous chemicals. A summary of monitoring reports required under U.S. environmental protection statutes in the mid-1980s can be found in CITIZEN SUITS, *supra* note 14, at 132-33. In addition, a forthcoming Environmental Law Institute Working Paper, PUBLIC ACCESS TO ENVIRONMENTAL INFORMATION, will analyze in greater detail such reporting requirements and their possible applications to public participation in the environmental protection system.

20. Freedom of Information Act of 1966, 5 U.S.C. § 552 (1988).

21. For a discussion of the importance of information and clear standards, *see* ELI STUDY, *supra* note 5, at V-13 to V-15.

22. Many environmental organizations publish lists of reporting numbers for citizens to call with information. *See, e.g.*, IZAAK WALTON LEAGUE OF AMERICA, A CITIZEN'S DIRECTORY FOR WATER QUALITY ABUSES: A STATE-BY-STATE RESOURCE LIST OF ENVIRONMENTAL AGENCY TELEPHONE NUMBERS (undated).

23. Clean Air Act § 113(f), 42 U.S.C.A. § 7413 (West 1983 & Supp. 1992).

24. If the citizen is bringing a lawsuit under an U.S. environmental statute with a citizen suit provision, he or she will be required to give advance notice to the alleged violator and to the government. This notice provision allows the violator an opportunity to come into compliance and enables the government to eliminate the need for the citizen suit by taking its own enforcement action. *See infra* Section 2.3.2.1.

25. *See* CITIZEN SUITS, *supra* note 14, at 11-12; Greve, *The Private Enforcement of Environmental Law*, 65 TUL. L. REV. 339, 352-53 (1990).

26. For a more detailed discussion of the various ways in which the public can participate in the environmental protection process, *see* ENVIRONMENTAL L. INST., PUBLIC PARTICIPATION IN ENVIRONMENTAL REGULATION (ELI Working Paper, Jan. 1991).

27. In the U.S., for example, courts generally presume that the individual is adequately represented by the government. *See* CITIZEN SUITS, *supra* note 14, at 66-67. Intervention is governed by statutes regulating all federal court cases which require that the intervenor have an interest in the "property or transaction" at issue. FED. R. CIV. P. 24(b).

28. *See* M. AXLINE, ENVIRONMENTAL CITIZEN SUITS § 5.03, at 5-3 & n.5 (1991).

29. Similar consent decrees can result from lawsuits filed by the citizen. *See infra* note 56.

30. *See, e.g.*, Clean Air Act § 113(g).

31. *See, e.g.*, Clean Air Act § 304(a)(2); Endangered Species Act § 11(g)(1)(C), 16 U.S.C. § 1540(g) (1988).

32. For example, if a statute provides that an agency "shall complete a thorough review" of air quality criteria, the agency must undertake such a review, regardless of whether the review is likely to prompt revision of the criteria. *See* Environmental Defense Fund v. Thomas, 870 F.2d 892 (2d Cir. 1989).

33. Such a court order will subject the agency to judicial penalties if the agency violates the order by continuing its failure to act.

34. Administrative Procedure Act (APA) § 702, 5 U.S.C. § 702 (1988). For an example of a statutory "discretionary" suit provision, *see* Clean Air Act § 307(b)(1). The standards of judicial review under the APA are set forth in § 706(2)(A).

35. *See* Chevron U.S.A. v. Natural Resources Defense Council, 467 U.S. 837, 842-45 (1984).

36. Suits seeking judicial review of agency decisions have been particularly important as a way of forcing agencies to consider the environmental impacts of their actions under the U.S. National Environmental Policy Act of 1970 (NEPA), 42 U.S.C. § 4321 (1982). The first suit brought under NEPA was brought by citizens and established the right of citizens to bring suits to enforce the environmental assessment requirements of the statute. *See* Calvert Cliffs Coordinating Comm. v. Atomic Energy Comm'n, 449 F.2d 1109 (D.C. Cir. 1971). Since that time, numerous suits have been brought against agencies for failure to file an environmental impact statement, or for filing an inadequate one. In the 1980s, over 800 suits led to 116 injunctions preventing agency action without further environmental assessment. U.S. COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY 1991, at 142-43 (1992).

As with many other environmental regulations, judicial review under NEPA has been limited to an examination of the procedural rather than the substantive requirements of the statute. Nonetheless, those procedural requirements, enforced by citizen suits, have forced agencies at

least to examine the environmental consequences of their actions -- a significant step beyond the pre-NEPA requirements. For additional information about the relationship between the substantive and procedural requirements of NEPA and the role both have played in altering agency action, *see* ENVIRONMENTAL L. INST., ENVIRONMENTAL IMPACT ASSESSMENT: INTEGRATING ENVIRONMENTAL PROTECTION AND DEVELOPMENT PLANNING (ELI Working Paper, June 1991).

37. Courts in the United States have willingly carried the doctrine of prosecutorial discretion through to the environmental statutes. Even where statutory language would appear to make enforcement a non-discretionary duty, courts have held that unless the language is explicit, discretion remains in the agency. *See, e.g.*, DuBois v. Thomas, 820 F.2d 943 (8th Cir. 1987) (under the Clean Water Act, citizen suits cannot require enforcement).

38. In a system, such as that in the U.S., that embraces the doctrine of prosecutorial discretion, allowing citizens to take enforcement actions will be crucial to achieving environmental protection goals.

39. *See generally* M. AXLINE, *supra* note 28; CITIZEN SUITS, *supra* note 14.

40. Krent, *Fragmenting the Unitary Executive: Congressional Delegations of Administrative Authority Outside the Federal Government*, 85 NW. U. L. REV. 62, 82 n.95 (1990).

41. *See* Clayton Antitrust Act of 1914, 15 U.S.C. § 15 (1988); Consumer Product Safety Act of 1972, 15 U.S.C. § 2060(a) (1988).

42. Although European Community (EC) law permits organizations to sue governments for violations of EC regulations, this is only true when individual nations grant standing to that group, and most European nations do not. *See, e.g.*, EUROPE, *supra* note 8, at 85 (discussing standing provisions in West Germany). Only Ireland's laws appear comparable to U.S. provisions: Irish citizens may bring a suit for injunctive relief against any person for violations of water, air, or land use regulations. Because of the risk that the plaintiff will have to pay defendant's costs and fees, however, the suits have not been commonly used. *Id.* at 11-12. In addition, Spain and Ireland appear to grant citizens some rights to enforce summarily those countries' limited criminal environmental statutes. *Id.* at 13, 37. Under Brazilian law, citizen organizations that have been in existence for at least two years can file "public actions" requesting the state or federal attorney general to investigate threats to the environment. Interview with Alberto Ninio, Staff Attorney at the Environmental Law Institute, in Washington, D.C. (July 1, 1992).

43. All but one of the major federal environmental acts permit direct enforcement by citizens in the courts against violators. *See, e.g.*, Toxic Substances Control Act § 20, 15 U.S.C. § 2619 (1988); Endangered Species Act § 11(g), 16 U.S.C. § 1540(g) (1988); Surface Mining Control and Reclamation Act of 1977 § 520, 30 U.S.C. § 1270 (1988); Marine Protection, Research, and Sanctuaries Act § 105(g), 33 U.S.C. § 1415(g) (1988); Federal Water Pollution Control (Clean Water) Act § 505, 33 U.S.C. § 1365 (1988); Safe Drinking Water Act § 1449; 42 U.S.C. § 300j-8 (1982 & Supp. V 1987); Noise Control Act § 12, 42 U.S.C. § 4911 (1982 & Supp. V 1987); Resource Conservation and Recovery Act (RCRA) § 7002, 42 U.S.C. § 6972 (1982 & Supp. V 1987); Clean Air Act § 304, 42 U.S.C.A. § 7604 (West 1983 & Supp. 1992); Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) § 310, 42 U.S.C. § 9659 (1982 & Supp. V 1987); Outer Continental Shelf Lands Act § 23, 43 U.S.C. § 1349 (1982). The only major environmental statute without a citizen suit provision is the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. § 136 (1988). Numerous state statutes also allow citizens to sue to enforce statutory provisions.

As an example of the growth in this category of suits, only twelve actions were filed under citizen suit provisions in 1978-79. *See* HAYS, *supra* note 1, at 481. Just ten years later, citizens were filing hundreds of suits a year against private individuals and government agencies, and the numbers were, if anything, increasing. *See* BNA REPORT, *supra* note 7, at 21-111 (1988) (78 suits filed for enforcement purposes under RCRA, CERCLA, and the Clean Water Act in 1987);

U.S. COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY 1987-88 (88 suits filed against government agencies for NEPA violations in 1987).

44. *Compare, e.g.*, Clean Air Act § 304(a) (citizen suit judicial enforcement) *with id.* § 113(b) (federal suit judicial enforcement).

45. *See* Clean Air Act § 304(a), § 113(d)(1); *infra* Section 3.2.3.

46. In addition, if the defendant's conduct is found to be malicious or wanton, a jury can award additional damages, beyond those necessary to compensate the plaintiff, solely for the purpose of punishing the defendant. There is no requirement that these "punitive damages" be proportional to compensatory damages. *See* Browning-Ferris Indus., Inc. v. Kelco Disposal, Inc., 492 U.S. 257 (1989) (upholding a jury's award of $6 million in punitive damages in a case involving compensatory damages of only $51,146).

47. Consider a factory that emits particulates that cause fog to form on a nearby highway, slowing traffic and causing occasional accidents. Any single traveler on the highway might not be able to bring a suit to abate this public nuisance, but the roadside homeowner into whose house fog-blinded vehicles regularly crashed would have a "special injury" and would be able to bring suit.

48. *See* Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 Mich. L. Rev. 471 (1970); Z. PLATER, R. ABRAMS & W. GOLDFARB, ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 365-412 (1992) [hereinafter ENVIRONMENTAL LAW].

49. *See* Marks v. Whitney, 6 Cal. 3d 251, 98 Cal. Rptr. 790, 491 P.2d 374 (1971) (public right in submerged land under streams and lakes on privately-owned property subjects private property owners to public trust doctrine); ENVIRONMENTAL LAW, *supra* note 48, at 400-01.

50. The standing requirements are very minimal, and nearly any individual can sue for violation of the statute. MICH. COMP. LAWS ANN. § 691.1201 (West Supp. 1984). Six other states adopted statutes based on Michigan's soon after 1970, but only Michigan's has been regularly used.

51. Ray v. Mason Country Drain Commissioner, 224 N.W.2d 883 (Mich. 1975). Despite the breadth and potential power of the Michigan statute, it has been used only rarely. By 1983, the statute had been the basis for only 185 actions, most of which were filed in its early years. *See generally* Slone, *The Michigan Environmental Protection Act: Bringing Citizen-initiated Environmental Suits Into the 1980s*, 14 ECOLOGY L.Q. 271 (1985).

52. Consider, for example, Japan's Civil Code Article 199, which provides that "[i]f a possessor is disturbed in his possession, he may by an action for maintenance of possession demand discontinuance of the disturbance as well as compensation for damages." J. GRESSER, K. FUJIKURA & A. MORISHIMA, ENVIRONMENTAL LAW IN JAPAN 135 n.16 (1981).

53. *See* Bándi, Environmental Enforcement in Hungary -- Today and Tomorrow 10 (Paper Presented at the Second International Conference on Environmental Enforcement, Sept. 1992).

54. Interview with Beatriz Gonzales, Colombian public interest attorney, in Washington, D.C. (June 18, 1992). *See* G. SARMIENTO, LAS ACCIONES POPULARES EN EL DERECHO PRIVADO COLOMBIANO [POPULAR ACTIONS IN COLOMBIAN PRIVATE LAW] 34 (1988).

55. *See infra* note 85 and accompanying text.

56. In addition, if the settlement results in a consent decree approved and enforced by the court, it can include legally enforceable provisions governing the future conduct of the parties, rather than simply allowing the defendant to pay an initial fee and then continue the challenged conduct. *See* M. AXLINE, *supra* note 28, at 7-29.

57. *See* G. BINGHAM, RESOLVING ENVIRONMENTAL DISPUTES: A DECADE OF EXPERIENCE 130-32, 134-37 (1986).

58. This policy decision often has strategic consequences for the citizen litigant. A plaintiff who happens to qualify for both a common law damages action and a statutory enforcement action might bring the two concurrently, thereby hoping to increase her bargaining power over the violator.

59. *See* M. DORE, LAW OF TOXIC TORTS § 24.01 (1992).

60. *See id.* §§ 24.03-24.04 (1992). *See generally* Brennan, *Causal Claims and Statistical Links: The Role of Scientific Uncertainty in Hazardous Substance Litigation*, 73 CORNELL L. REV. 469 (1988).

61. *See* DORE, *supra* note 59, at § 5.10.

62. In the United States, citizens may only file enforcement suits if the violations are ongoing or if there is a substantial likelihood that they will be repeated. *See* Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, 484 U.S. 49 (1987).

63.. U.S. courts take this requirement very seriously. *See* Hallstrom v. Tillamook Cty., 493 U.S. 20 (1989). However, lawsuits may be brought immediately after filing notice in the event of violations of certain standards, particularly when the violation may threaten human health. *See* Clean Air Act § 304(b).

64. *See generally* CITIZEN SUITS, *supra* note 14, at 53-62.

65. *See id.* at 77. In some cases, as when an endangered species is threatened, a statute may explicitly require the court to issue an injunction. U.S. Endangered Species Act § 11(g)(1).

66. *See* CITIZEN SUITS, *supra* note 14, at 77-78.

67. *See, e.g.*, Boomer v. Atlantic Cement Co., 26 N.Y.2d 219, 319 N.Y.S.2d 312, 257 N.E.2d 870 (1970) (cement plant allowed to continue polluting upon payment of continuing damages to adjoining landowner).

68. Under one United States statute, the Clean Air Act, judges may assign up to $100,000 of these penalties to a fund which will be used for "beneficial mitigation projects which are consistent with" the Act. Clean Air Act § 304(g)(2).

69. *See* Clean Water Act § 505(a); RCRA § 7002(a); Clean Air Act § 304(a). The 1990 inclusion of civil penalties in the Clean Air Act Amendments is significant, because it represents a recent Congressional endorsement of the usefulness of such provisions.

70. *See, e.g.*, Toxic Substances Control Act § 16(a).

71. In one successful citizen suit brought to rectify permit violations by a wastewater treatment plant, the appellate court found that the trial court's civil penalty award of $3.2 million was too low. The court of appeals instructed the trial court to recompute the penalty, suggesting that the appropriate total might be the statutory maximum of $4.2 million. *See* Public Interest Research

Group of New Jersey v. Powell Duffyn Terminals, Inc., 720 F. Supp. 1158 (D.N.J. 1989), *aff'd in part and rev'd in part*, 913 F.2d 64 (3d Cir. 1990).

72. For academic criticism of civil penalties in citizen suits, see Blomquist, *Rethinking the Citizen as Prosecutor Model of Environmental Enforcement Under the Clean Water Act: Some Overlooked Problems of Outcome-Independent Values*, 22 GA. L. REV. 337 (1988) (philosophical critique of permitting citizens to prosecute); Lewis, *Environmentalists' Authority to Sue Industry For Civil Penalties is Unconstitutional Under the Separation of Powers Doctrine*, 16 ENVTL. L. REP. (Envtl. L. Inst.) 10,101 (1986). *But see* Chesapeake Bay Foundation, 652 F. Supp. at 623-26 (citizen civil penalty requests not unconstitutional).

73. *See* Cross, *supra* note 2, at 70-71 (1989). For a more appreciative perspective on this type of settlement, *see* Mann, *Polluter-Financed Environmentally Beneficial Expenditures: Efficient Use or Improper Abuse of Citizen Suits Under the Clean Water Act?* 21 ENVTL. L. 175 (1991).

74. *See* Sierra Club v. Electronic Controls Design, 909 F.2d 1350, 1354-56 (9th Cir. 1990).

75. *See* M. AXLINE, *supra* note 28, at § 7.06.

76. *See* Price, *supra* note 7, at 33.

77. As noted above in Section 2.3.1.3, the doctrine of "prosecutorial discretion" precludes citizen challenges to government decisions not to take particular enforcement actions in the United States. This limitation renders the availability of citizen enforcement actions particularly important. Even in the U.S., however, a blanket failure to enforce *any* portion of a statutory or regulatory regime might still be subject to court challenge. *See* Heckler v. Chaney, 470 U.S. 821, 833 n.4 (1985).

78. Valley Forge Christian College v. Americans United for Church and State, 454 U.S. 464 (1982).

79. This constitutional standing requirement applies to all lawsuits, not just to enforcement suits brought under citizen suit provisions. In practice, most controversy over standing centers on statutory suits, not common law actions. Courts may perceive a greater threat of inappropriate citizen involvement in a statutory, as distinct from a common law, action. In the latter case, a plaintiff cannot prevail without proving that he was injured by the challenged actions; no such requirement applies to a citizen plaintiff in an environmental enforcement suit.

80. This view of standing remains common in many other nations. *See* EUROPE, *supra* note 8, at 81-82 (discussing West German standing provisions).

81. *See* Sierra Club v. Morton, 405 U.S. 727 (1972).

82. *See* Lujan v. Defenders of Wildlife, 60 U.S.L.W. 4495 (1992).

83. *See* Association of Data Processing Service Organizations v. Camp, 397 U.S. 150 (1970).

84. Contrast this with an Irish case in which "an association of traders who objected to the competition caused by [a] . . . development [that violated zoning laws] successfully sought an injunction to close it down, even though their motivation was largely commercial." EUROPE, *supra* note 8, at 13-14 (citations omiited).

85. *See* Kattan, A.E. y otro v. Gobierno Nacional (Poder Ejecutivo), 1983-D L.L. 568, 576 (1983). First, the judge construed the preamble of the 1853 Argentine Constitution, declaring the framers' intent to ensure and guarantee general welfare and property to future generations, as a

mandate to all branches of government, including the judiciary, to protect the environment. Second, the judge found that a right to ecological protection was implied by another constitutional provision. Finally, the judge relied on a provision in a wildlife protection statute imposing on Argentine citizens a duty to protect wildlife, as well as a law ratifying an international convention on the trade of endangered species.

86. "An estimated 1,000 to 1,400 federal facilities in the United States are either on the Superfund list [i.e., they have been determined to contain significant hazardous waste deposits] or eligible for that list." M. AXLINE, *supra* note 28, § 2.08.

87. *See* Bowman & Hunter, *supra* note 9, at 345 (noting that at the time of the revolutions in the region, over 90% of property and industries in Central and Eastern Europe were owned by the state, and that privatization is proceeding slowly); Bándi, *supra* note 53, at 4 (stating that over 80% of the Hungarian economy is still in state ownership).

88. In fact, because the federal government cannot sue itself, statutory citizen suits and suits brought by the states are effectively the only way in which environmental standards can be enforced in the United States against federal government entities.

89. Because common law actions for damages present an opportunity for a personal benefit to the plaintiff, the traditional rules of cost-bearing may be more appropriate in such cases.

90. While some groups are able to reach self sufficiency, some plaintiff's attorneys have noted that even these attorney fee provisions "are not nearly adequate enough to encourage people to bring suits -- not if they want to eat, anyway." Terris, *Private Watchdogs: Internal Auditing and External Enforcement--Three Perspectives*, 17 ENVTL. L. REP. (Envtl. L. Inst.) 10,254, 10,255 (1987). This difficulty is especially apparent for initial, "up front" litigation costs. ELI STUDY, *supra* note 5, at V-25.

91. *See* ELI STUDY, *supra* note 5, at V-13; CITIZEN SUITS, *supra* note 14, at 132; Preston, *supra* note 8, at 47-48.

92. *See* McElfish, *SMCRA and Environmental Groups*, in MOVING THE EARTH (U. Desai ed., forthcoming 1992).

93. *See, e.g.*, Greve, *supra* note 25, at 353 (only one quarter of citizen suits filed in the United States between 1984 and 1988 were brought by individual or local coalitions, with the remainder filed by national or regional environmental organizations).

94. "Public interest law firms" encompass the litigation departments of large environmental organizations. These organizations, which rely for survival on attorney fee provisions in environmental, civil rights, and other statutes, are an additional driving force for the liberalization of the U.S. statutory regime and legal system. An introduction to the role of public interest law firms can be found in Bonine, *The New Private Public Interest Bar*, 1 J. ENVTL. L. & LITIG. xi (1986).

95. The Polish Nature Protection Act provides for the deputization of private citizens as "Environmental Protection Guards," who enforce environmental regulations within national parks and forest reserves, or as "Communal Protectors of Nature," who maintain the parks and forests and instruct people about environmental regulations. *See* Bowman & Hunter, *supra* note 9, at 314.

96. *See* Preston, *supra* note 8, at 61-65.

97. A 1984 report on citizen suits in the United States identified the lack of readily accessible information as "the single most important factor inhibiting citizen enforcement." "The crucial variable" in a successful citizen suit regime was information provided to citizens in a form that identified key compliance indicators. ELI STUDY, *supra* note 5, at V-12 to V-13.

98. *See supra* note 19.

99. *See id.*

100. For a more detailed discussion of information access mechanisms and their uses, *see* ENVIRONMENTAL L. INST., PUBLIC ACCESS TO ENVIRONMENTAL INFORMATION (ELI Working Paper, forthcoming 1992).

CITIZENS ROLE IN ENFORCEMENT: A SPUR, A SUPPLEMENT, AND A SUBSTITUTE

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SUMMARY

Enforcement tends to look to the end of the process. After the standards have been set, the permits issued, the inspections and reviews carried out, enforcement plays its role. This paper argues that, for enforcement to be effective, the proper basis must have been laid at the beginning of the process in the design of the system of environmental control. Specifically, provision must be made for the generation of the information required to determine whether environmental rules are being complied with.

1 INTRODUCTION: THE NEED FOR THE RIGHT KIND OF INFORMATION

Effective citizen enforcement depends on access to the right kind of information. The right kind of information is:

(a) information that allows a violation to be easily identified; and
(b) information that is in usable form, that is, that readily serves as proof in enforcement proceedings.

In practice, effective government enforcement requires this kind of information, too. In this sense, the distinction between citizen and government enforcement is an artificial one.

Generation of this information depends on establishing in the law the requirements for appropriate sampling, monitoring and reporting ("SMR") of environmental data. The lesson for enforcers, and for others concerned with the environment, is that effective enforcement depends, in the first instance, on the quality of the SMR requirements established in the law and related regulations. If the system is not properly constructed, no amount of inspection or control by citizens or by government, will make it effective.

This paper considers the citizen's role in enforcement of environmental law on the basis of experience with the enforcement of water pollution control legislation in the U.S. and in the Netherlands[1]. More so than other examples, the U.S. Clean Water Act provides this kind of information and therefore has been used effectively by citizens. The Clean Water Act also supports citizen enforcement by explicit provisions authorizing citizen judicial enforcement actions (citizen suits). In the Netherlands, the Wet Verontreiniging Oppervlaktewateren (WVO) (Surface Water Pollution Act) has not succeeded in generating this information routinely and citizens have been correspondingly less successful in their enforcement efforts.

2 THE STATUTORY REGIMES

For the discussion that follows, it is useful to begin with a short description of the two laws in question, the U.S. Clean Water Act and the Dutch Wet Verontreiniging Oppervlaktewateren (Surface Waters Pollution Act).

2.1 The U.S. Clean Water Act

The Clean Water Act takes as its starting point the prohibition of any discharge of a pollutant from a point source (a pipe) into the (surface) waters of the United States except in accordance with a permit[2]. The permits set limits on the kind and quantity of pollutants which may be discharged into the water and in addition require sampling, monitoring and reporting on a

regular basis. Reporting takes place primarily via Discharge Monitoring Reports (DMRs) which are usually filed each month by the permit holder.

Failure to comply with the terms of the permit in any respect gives rise to strict liability for a violation. Violations may be enforced by the government or by citizens. The government may enforce administratively for lesser violations or judicially for serious violations. Citizens may enforce judicially in the absence of governmental action. Since there are many possible cases which may be brought, citizen enforcement acts as a useful supplement to governmental prosecutorial resources. The results achieved by citizen suits also encourage more energetic prosecution by the government.

Proof of harm to the waters, the aquatic life, or damages to individual interests need not be shown. It needs merely be shown that the permit limit has been violated. Since the law requires the discharger to report what it has discharged and since these reports may be obtained by the citizen, violations can be easily identified, documented, and proven in court.

Sanctions are twofold in nature. The law authorizes the court (or administrative agency) to impose penalties of up to $25,000 per day of violation and, secondly, to impose injunctive relief. Injunctive relieve is a broad power of the court to command the defendant to perform a specified act or to meet the specific requirements of the law. Thus, a court may order changes in the operation or staffing of a plant, set schedules for construction of pollution control devices, or order other changes or actions. The court retains the power to impose fines for the defendant's failure to obey such court orders.

2.2 Wet Verontreiniging Oppervlaktewateren (WVO)

The WVO or Surface Water Pollution Act similarly takes as its starting point the prohibition of the discharge of wastes into the surface water without a permit[3]. Among the differences with the Clean Water Act, however, are that permits tend to be less comprehensive, covering fewer pollutants and contain few, if any, sampling and monitoring requirements and minimal reporting obligations. Of particular importance for enforcement have been the absence of strict liability for violations and strong sanction provisions. There is of course no citizen suit provision as this is unknown in Dutch environmental law. This is not to say citizen action is unknown in Dutch law. The administrative law system offers considerable opportunities for action against governmental authorities. Civil law actions against polluters are also possible, though rare[4].

3 IDENTIFICATION OF VIOLATIONS BY CITIZENS

The starting point of citizen enforcement activity is determining whether there is polluting activity which warrants enforcement. The question of whether citizens can identify violations can also be asked another way, however. Is it possible to know whether a discharger is complying with his permit?

3.1 Identification of Violations under the Clean Water Act

The Clean Water Act makes identification of violations by citizens (and equally by government authorities) a simple matter, because each discharger's permit and discharge monitoring reports (DMRs) are on file with the designated government authorities. Because permits and DMRs are public documents, the interested citizen can readily obtain them. Citizen groups have thus been able to investigate, for example, the dischargers in a particular industry, all major dischargers in a state, or all dischargers to a particular water body.

The review of a DMR is also simple. Most DMRs consist of a few pages of orderly columns of figures reporting the measured amount or concentration of the pollutants covered by the permit in accordance with the sampling requirements of the permit (e.g. continuous sampling, daily, twice weekly). The values reported on the DMR need only be compared with the standards set by the permit to determine if there has been a violation. It is a matter of a few minutes work to review a DMR and identify a violation.

3.2 Identification of Violations under the WVO

In the Netherlands, in contrast, this paper record is not available. WVO permits are public documents, so if they do exist, citizens can obtain them[5]. The initial problem is that they often do not exist. Although the law requires all dischargers to have a permit, the issuing authorities continue to have a backlog[6]. Certain industry sectors and many smaller enterprises still lack WVO permits. Environmental organizations recently successfully brought an action to force the issuance of WVO permits for the heavily-polluting glastuinbouw industry (greenhouse growers of flowers and vegetables)[7].

Even where permits exist, identifying violations may not be easy. One reason is that the permits often contain outdated limits which the permit holder can meet without difficulty[8]. WVO permits are not generally issued for a definite term as Clean Water Act permits are (5 years). Moreover, numerous businesses hold so-called historical permits which reflect lenient grandfathered standards pre-dating the WVO[9]. Identification of violations of these permits is thus not really the issue. Permit conditions are being met but the permits are not protecting water quality.

The WVO permits also seldom require reporting as detailed and informative as DMRs. Even the information that is available is often not in easily digestible form[10]. The government recently conceded to environmental organizations investigating the discharges of major industrial installations in Rotterdam harbor that it lacked the personnel and technical capacity to review the information it receives from these polluters[11]. In any event, the data the government assembles is often not in a form that allows for rapid review and easy understanding.

One possible explanation for the lesser reliance on reporting by the discharger itself relates to the legal status of the information. Where the responsible government authority has evidence of a violation, it can refer the matter to the public prosecutor[12]. The prosecutor then investigates further and may elect to commence proceedings against the violator. These proceedings are criminal in nature and information provided by the discharger itself can not, as a rule, be used against it. This is a protection analogous to the protection against self-incrimination in American law. Whether as a result of this rule or not, in practice it is the government that does most of the sampling itself. A recent development of note is the acceptance of samples collected by environmental organizations as evidence in prosecutions for WVO violations[13].

WVO permits however show a recent trend increasing the SMR requirements[14]. It is obviously not optimal if the system does not allow even government oversight to function properly. Obviously, citizen enforcement in such circumstances is not likely to be possible, let stand effective. The consequences for citizen enforcement are considerable. Instead of going to an office of a public authority in order to examine a particular file, citizen's groups are forced to extreme lengths to gather information, including literally taking to the water itself.

Citizen's groups have investigated dischargers they suspect to be violating the law by undertaking their own data collection efforts. Using their own boats and equipment, environmental organizations have collected samples directly from dischargers' pipes[15]. Finding and gaining access to these pipes is not always possible, however. Even if it can be done, the process is an expensive, time-consuming, and uncertain one.

There is thus a major contrast in the ability of citizens to identify violations under the two legal regimes. Under the Clean Water Act, a simple administrative check is sufficient. In the Netherlands, citizens have to begin by raising the money to finance their own investigation, including obtaining the necessary equipment to sample with scientific accuracy in order to begin the process of identifying a violater.

4 INFORMATION IN USABLE FORM

A second precondition for effective enforcement, either by citizens or by government authorities, is ready access to the relevant sort of information. In the case of a water polluter, that information is the data which will allow the enforcer to show that a violation of the law has taken place.

4.1 Information Generated under the Clean Water Act

Under the Clean Water Act, the discharge permit specifies extensive reporting of exactly the kind of information necessary to determine whether a violation has taken place. The permit lists a number of pollutants and the concentration values or other limitations which apply. In addition, and no less important, the permit specifies the frequency of monitoring required, and the nature of sampling which must take place. Thus, for example, pH must be measured continuously and not fall below a stated minimum nor exceed a stated maximum value. Solids must be measured on 20 separate days per month to allow calculation of a monthly average but there is also a daily maximum value. The law treats a failure to comply with any of the sampling, monitoring and reporting requirements on an equal footing with failure to comply with a discharge limit for a pollutant. Both are violations of the permit, and subject to the same sanctions[16].

4.2 Information Shortcomings under the WVO

Water quality permits in the Netherlands are much less specific. The WVO authorizes SMR requirements but the permits generally do not impose sufficient requirements to allow a clear picture of a discharger's activities to emerge[17]. Thus, for example, aggregate information on total discharges over a year can be quite useless for pinpointing violations of a standard at any particular time. Such information is generally not suitable to show harm to water quality, since water quality damage is usually directly related to the concentration of a given pollutant at a particular time. If a yearly average is reported, no one can be sure whether the excessive discharge of pollutants took place at a time of high or low stream flow, during the breeding season of a vulnerable species and so forth.

In short, properly formulated SMR requirements are just as essential as standards for the pollutants themselves.

There is a further complication with the ultimate enforcement of a violation using information generated under the law. Under the Clean Water Act, the DMR is a defendant's own document, signed by the discharger itself. In a legal proceeding, proving a violation of a permit condition is simple. The defendant's DMR, previously filed with the responsible public body, is its admission that a discharge with the stated value took place. Moreover the Clean Water Act does not require proof of harm to water quality in order to establish a violation of the law. A violation is established by proof that the permit limit was exceeded. This is exactly the information that the DMR can incontrovertibly provide.

In the Netherlands, in order to make a showing of a violation stick, a citizen enforcer would have to show that its sampling was accurate and representative, as well as demonstrating the water quality impact resulting from the violation. Defendants are thereby put in a position of being able to raise all sorts of arguments to discredit the citizen's work, such as the inaccuracy of the sampling, that it was not representative, that a laboratory error was involved, or that the exceedance can be explained by any one of a number of other factors. Furthermore, the defendant can argue that the discharge did not come from its plant or that it did not cause harm to the water. Obviously, with this long list of factors upon which to base arguments, the likelihood that the citizen will succeed in proving a violation is considerably reduced.

5 ACCESS TO INFORMATION

An additional crucial precondition for the success of citizen enforcement is the citizen's access to information.

5.1 Access to Information Generated under the Clean Water Act

Under the Clean Water Act the DMR is a public record. Citizen's access to public records and documents are guaranteed by freedom of information law. Dischargers routinely file DMRs

and access to these documents is so routine that most public authorities do not even require a formal freedom of information act request from citizens wishing to review these records.

5.2 Access to Information Generated under the WVO

In the Netherlands, access to these public records is not routine. The Netherlands does have a form of freedom of information law, the Wet Openbaarheid van Bestuur (Wob) or Open Administration Act[18]. Access to information under the WVO is, however, regulated by the Wet algemene bepalingen milieuhygiëne (Environmental Protection (General Provisions) Act) (WABM). The WABM provides that publicly-held records related to environmental permits are, as a general rule, accessible to the public[19]. There are however broad loopholes in the law. Particularly significant in this context is the confidentiality exception. A business entity can, if it so chooses, designate information it provides to the government as confidential business information[20]. Information so designated may not be released to the public. It is well-nigh impossible to challenge the designation of information as confidential. The exception in the law leaves the regulated in the position of deciding what information the public will see, a decision which is not open to public scrutiny or challenge.

In addition, dossiers referred to the public prosecutor are also not public. Pending a decision whether to proceed with prosecution - a decision that can take months or longer - citizen access to the information is stymied.

Citizen experience with requests for information also reveal certain practical problems. Their requests are not treated as routine and frequently encounter administrative reluctance to process them. Officials are also cautious about opening files and releasing information in part out of fear of releasing confidential information and anxiety about disturbing good relations with the business that supplied the information[21]. It is clear that the system still emphasizes closeness more than openness.

In neighbouring Belgium, where the situation is, if anything, even worse, citizen enforcement efforts strand at an even earlier point, since in Belgium until recently one was not even entitled to know if a discharger held a permit, much less what it contained in the way of standards.

This difficulty with access to the relevant information raises a further unnecessary barrier to citizen enforcement.

6 CONDITIONS FOR CITIZEN ENFORCEMENT

There are of course a number of other preconditions for citizen enforcement to take place. These are beyond the scope of extensive discussion here. A comment about access to the courts is however in order.

The standing of the citizen to bring an action must not be in serious question. Legal action must not be prohibitively expensive. Citizens must not face having to pay the costs of the other side's defense if the citizen's action is unsuccessful.

Under the Clean Water Act, citizen action is specifically encouraged by express provision of the law. Moreover, because a strict liability standard applies, the chance of success is extremely high. As described above, violations are readily identified and proven. The risk of losing a citizen suit and therefore the risk of having to pay the costs of the winning party is small. The Clean Water Act also provides that citizens can recover their attorney's fees in the event they are successful.

In the Netherlands, the notorious American readiness to settle differences before a judge is absent. There is no citizen suit provision in the WVO. Moreover, there remains a residual antipathy in the judiciary to citizen action. This is reflected in the close scrutiny given the question of standing despite established jurisprudence acknowledging citizen interest in environmental matters as legally sufficient to support judicial action.

Equally significant is the substantially smaller chance of success in proving one's claims. Going to court on the basis of your own water samples is a far less secure way of proceeding

than to rely on a defendant's own documents containing signed statements of violations of permit standards. Moreover, should the citizen action prove unsuccessful, the costs in civil actions (an item which is less than actual attorney's fees) can mount to thousands or ten of thousands of guilders - amounts which environmental organizations can rarely if ever, afford to lose. Administrative proceedings by contrast can be prosecuted for only nominal costs.

Proceedings under the WVO are also made more extended, complicated, and therefore expensive by the need to show harm to water quality. Under the Clean Water Act, the permit limits are deemed to have been established at a level appropriate to protect water quality. Harm to water quality is relevant only to the penalty stage and not the liability stage of the action.

Another important aspect encouraging citizen enforcement is the chance of a satisfactory result. The court must be in a position to correct the problem through financial or other means. Under the Clean Water Act, significant penalties of up to $25,000 per day of violation can be imposed. In addition the court has injunctive power, that is: the court can order a polluter to take specific steps to come into compliance by a specific day.

In the Netherlands this is less likely. The courts lack authority to impose significant penalties and their injunctive powers are also less extensive and less extensively used.

7 RELATION TO GOVERNMENT ENFORCEMENT

Citizen enforcement works best where it is simple and inexpensive. The preceding discussion has focused on factors that make citizen enforcement possible and effective. If a citizen is in a position to identify violations, he is in a position to act.

The Clean Water Act has demonstrated that a system of this type is possible and workable. Over the past decade, citizens have initiated hundreds of legal actions against permit holders for violations of the Clean Water Act. These actions have been brought against a broad spectrum of polluters including large industrial installations such as steel mills, municipal authorities operating waste water treatment plants, and smaller enterprises whose discharges have serious water quality impacts. These actions have resulted in substantial penalties for non-compliance and court orders to take the necessary steps to come into compliance. In addition, as the next section will discuss, citizen enforcement has had an impact on government enforcement activities.

In the Netherlands, citizen enforcement efforts have been hampered by difficulties in obtaining and making use of information about violations. Citizen enforcement action has been correspondingly limited as the following sections will discuss.

7.1 Spur

One of the functions of citizen enforcement is to spur, to provoke, to encourage government enforcement to take place.

The Clean Water Act to this end contains a notice provision requiring citizens intending to file suit against a polluter, to give the government sixty days notice of their intent to file suit and to bring to the attention of the government the violations at issue[22]. This notice provision gives the government an opportunity to act. If the government files suit within the sixty day period, the citizen action is foreclosed. If the citizen suit period passes without the government filing, and citizens files a law suit, the government may always intervene as a party. Government right of intervention is unlimited. Even at the conclusion of the case the government may step in to review the settlement terms agreed to by the citizen enforcer and the defendant.

Experience in the US with the Clean Water Act's notice provision has shown that it is effective in bringing to the government's attention the violations concerned and government enforcement has on many occasions resulted.

Government enforcement has also on many occasions <u>not</u> followed the notice given by citizens in which case citizens have been free to pursue the action themselves.

In the Netherlands there is no such formal procedure. Citizens may bring to the government's attention suspected violations by any means available. In general, environmental

groups, aware that the possibility for direct enforcement action is limited, have followed the route of urging government action[23]. The water quality sampling by environmental organizations has also served this purpose by calling attention to a water quality problem and calling for further government action. Given the dominant overlegcultuur (discussion culture), the government generally responds by entering into discussions with the dischargers involved[24]. There is a general reluctance to pursue judicial remedies. If the competent authority fails to act, or act satisfactorily, citizens can bring an administrative action to compel a more forceful response.

The Netherlands is situated at the mouth of the Rhine and other major rivers including the Maas and the Schelde which flow through Belgium. Efforts to improve water quality here are therefore to a considerable extent dependant on actions taken upstream. The Belgian authorities have however been notoriously lax in controlling water pollution from industrial sources and have not constructed adequate facilities for treatment of domestic waste. Brussels, to cite the most egregious example, discharges untreated sewage into the waters.

Environmental organizations in the Netherlands have for years without success urged the Dutch government to tackle this transboundary problem in conjunction with the Belgian authorities. Improvements have been slow or non-existent. With Belgian polluters of international water courses, the spur has not worked. Despite repeated pleas by citizens and environmental organisations and the evidence they have gathered, action against Belgium water polluters via the Dutch government has not taken place. Environmental organizations have accordingly begun to challenge Belgian polluters in the Dutch courts, thus far without direct success[25].

Citizen enforcement can be an effective spur if the government knows that there is a real possibility of citizen action. The US experience in this respect is instructive. In the first half of the 1980's citizen enforcement activity was considerable. In the latter half of the 1980's, partly as a result of this increased citizen's enforcement, the US government also began enforcing much more than it had previously. The government knew that the law provided and the practice had borne out that following failure of the government to initiate a judicial action a citizen suit would follow.

In the Netherlands, in contrast, the possibility of a citizen's legal action following a complaint, is much less likely and may partly explain why Dutch governmental authorities tend to respond to citizen complaints of water pollution violations by entering into further discussions with the polluter as opposed to taking legal action.

In the case of the Belgian water polluters, the Dutch government has been negotiating the so-called 'water treaties' with the Belgian government for twenty years or so without notable progress.

7.2 Supplement to government enforcement

As anyone concerned with environmental law and enforcement knows, attempting to regulate and to keep track of the compliance with environmental laws on the part of industries is an enormous task. In the US the number of Clean Water Act permit holders is in the tens of thousands. It is simply impossible, even under the best of circumstances, for government to do everything. Citizen enforcement is therefore a useful supplement to government resources. Citizen enforcement strengthens the government's reach and can also reinforce the government's power to the extent that a polluter or a potential polluter will undertake efforts to comply with the law because it knows that it faces two possible enforcers: the government and citizens.

In the Netherlands, in contrast, citizen enforcement is difficult and therefore rare: the government must do it virtually all.
The violater knows that if it can avoid government enforcement, e.g. by prolonging discussions, or promising improvements, or threatening to close its plant, it faces very little risk of enforcement by citizens' groups.

7.3 Substitute for government enforcement

Citizen enforcement is also useful as a substitute for government enforcement when the government, for political or policy reasons, chooses not to enforce. Under the Clean Water Act in

the early eighties, government's failure to act was recognised by citizens and environmental organisations and they stepped into the gap left in enforcement. Citizen enforcement in such an instance serves the interest of environmental policy and fairness.

The vast majority of businesses have invested in the equipment and manpower and their training needed to meet the law's requirements. Their competitors who have not, have an unfair advantage if they do not incur these costs and are not penalised for their failure to do so.

8 GEDOOGBELEID: THE POLICY OF CONDONING VIOLATIONS

No discussion of citizen enforcement in the Netherlands would be complete without mentioning the official government policy which sanctions non-compliance with the law. This policy, known as 'gedoogbeleid', allows violators of the law to escape prosecution. 'Gedoogbeleid' or the policy of condoning violations, goes beyond prosecutorial discretion. It results in an official exception being made to the law's requirements.

In the past, this exception was generally passive, that is the government simply did nothing to enforce against violations it knew of. Two years ago, the Ministers of Environment and Water Management pledged before Parliament to restrict the practice[26]. The condoning of violations still occurs but, in theory, subject to the conditions spelled out in the Ministers' pledge. The condoning policy is now active in the sense that it is reflected in an official written document from the relevant competent authority to the violater in question. This document promises to forego enforcement for a transitional period after which the violator is expected to come into compliance.

The practice continues, however. The condoning of violations can vitiate citizen enforcement entirely. A recent example of this is an action brought by the Stichting Natuur en Milieu, against one of the Netherlands' two nuclear power installations for failure to have a permit based on appropriate consideration of safety factors. Immediately following a high court decision in favor of the environmental organisations ruling that the reactor was operating without the appropriate permit, the Dutch Minister of Economic Affairs, with responsibility for energy, announced that he was prepared to promptly issue a permit allowing the installation to continue operation.

9 ENFORCEMENT IN OTHER CONTEXTS

Thus far we have considered enforcement under the traditional end-of-pipe type command-and-control regimes. Before concluding, it is worthwhile to take a look at two other aspects where citizen enforcement can play a role in the prevention of environmental damage.

9.1 Environmental impact analysis

The citizen role in forcing environmental impact analysis to be performed and performed properly, has been significant. Again, information is crucial. Perhaps the most important information is the timely announcement of consideration of a project. Publication is therefore of essential importance.

By publication is meant an announcement in, at a minimum, a journal of wide circulation in the affected locality. The announcement should describe the project sufficiently to allow the reader to get an idea of its scope. Publication should be followed by the right of the public to examine and comment on the project plans as well as on the environmental analysis performed for the project.

The citizen right to challenge environmental impact statements for inadequacy, or the failure to perform them altogether, is a powerful incentive to government and project sponsors to get it right to begin with (and to consider public comments), lest they be sent back to the drawing board with the attendant loss of time and the costs that that entails.

This has been effective. The US National Environmental Policy Act, the first statutory authority for environmental impact analysis, is of broad application, concentrating on possibly significant effects on the environment. In the US, an entire industry has grown up around the preparation of environmental impact analysis. The growth of environmental awareness in public authorities and among project developers has also been significant and is consistent with the purposes of the legislation.

In the Netherlands, the application of environmental impact analysis requirements has been more limited. Only certain categories of projects are subject to the law. This results in a less extensive look and also a less extensive role for citizens in ensuring that potentially environmentally harmful projects are screened for these effects at an early and meaningful moment. Still, the number of environmental analyses is steadily on the increase with the corresponding development of increasing public attention to potential impacts.

9.2 Covenants

There is a trend in environmental policy-making to move away from the traditional command-and-control regulatory regimes toward greater reliance on voluntary agreements between government and industry to achieve environmental compliance.

The use of such covenants as an instrument of environmental policy is for a number of reasons, a disturbing development.

With respect to citizen enforcement, it is particularly serious in that the use of covenants to replace statutory requirements eliminates the possibility of citizen enforcement.

A covenant is an agreement in the nature of a contract between the government and private parties. As a general rule, third party rights are not protected, or put in another way, persons not party to the contract have no right to enforce its terms. If the contract is breached by industry, and the government chooses not to enforce against this breach, there is no remedy for the citizens for the government's failure to act.

Add to this the non-binding nature of many such agreements, and it is easy to see why environmental groups have objected to the practice of carrying out environmental policy by means of voluntary agreements with industry.

10 DIRECTIONS FOR THE FUTURE: THE EUROPEAN DIMENSION

10.1 Enforcement across the Disappearing Border

In Europe, of course, transboundary pollution effects are a major problem. This is especially true in the Netherlands, which sits at the mouth the Rhine and other major rivers, and between the industrial centers of England and Germany. Transboundary pollution requires transnational solutions and these have been sought primarily in the framework of the European Community (EC). Arguably, the difficulties citizens have encountered in transnational enforcement should vanish with the disappearance of the borders between EC countries with the completion of the Internal Market.

EC environmental legislation can have major implications for enforcement across national boundaries. Following a decision by the European Court of Justice, citizens may now bring actions in the place where the environmental harm occurs (i.e. their home country) against polluters operating in another state. This decision has paved the way for actions such as those noted above against the Belgian water polluters.[27]

Further implications for the standing rules under the internal market could also profitably be investigated. At least where EC-derived environmental rules are at issue, standing should be granted to all citizens of any member state who can show the requisite interest in the subject matter.

A further problem is with access to information. Whatever rights a citizen of a particular state has to obtain public records in his own country, he is generally not able to extend these

rights to obtain information in another country. This may change with the coming into force of the EC's directive on freedom of access to environmental information at the end of this year[28].

Disregard of the citizen in transnational matters is reflected also in the EC's environmental impact assessment directive which requires notification of governmental authorities in another member state of the possible construction of a project with environmental implications[29]. No equivalent notice is given to citizens across the border.

10.2 Environmental Inspectorates

Much discussion in the European context on future directions in environmental enforcement has centered recently on the establishment and strengthening of inspectorate services at EC and national levels.

It is the view here that such efforts are misguided. On-site inspection can usefully supplement but not substitute for administrative oversight. It is prohibitively expensive by comparison with the alternatives available. The better method is to see to it that the appropriate paper record is created as described above. Such a paper record can be administratively controlled, and is in a final analysis, a more effective compliance mechanism in that enforcement on the basis of the administrative record is simple and sure.

11 CONCLUSION

From the point of view of government and industry as well as that of the citizen enforcer, what is needed is a regulatory system that, wherever possible, licenses the polluting activities of individual enterprises (public and private) and specifies what they can release into the environment. Equally important, these permits must specify sampling, monitoring and reporting requirements which result in data that provides a complete and ongoing picture of the polluting activities to the polluter, to the regulating governmental authority, and to the interested citizen.

Only then will government be in a position to perform its oversight and control functions efficiently and effectively. And if this information is available to the citizen, he will be in a position to aid in these efforts as a watchdog and helping hand for government enforcement efforts.

ENDNOTES/REFERENCES

1 This paper draws on the author's first-hand experience with these matters. In the United States from 1985-89, he represented environmental organizations in citizen suits under the Clean Water Act against industrial and municipal polluters. In the Netherlands, the Stichting Natuur en Milieu has been actively involved in enforcement against water polluters as well as efforts to change the law to strengthen its enforcement provisions.

2 33 U.S.C. sections 1251 et seq.; section 1311.

3 Wet van 13 december 1969, Stb. 536; Art. 1(1).

4 On the enforcement rights of citizens, **see generally** Jurgens, V., Langenhoff, V. and Robesin, R., **Actieboek Natuur en Milieu**, W.E.J. Tjeenk Willink, Zwolle (2nd ed. 1989).

5 **Wet algemene bepalingen milieuhygiene** (Environmental Protection (General Provisions) Act) (WABM), Wet van 13 juni 1979, Stb. 442, Art. 57.

6 Teunissen, R. and Groen, M. (ed.), **WVO afdoende of afgedaan?**: Een onderzoek naar het functioneren van de Wet **Verontreiniging Oppervlaktewateren**" (A Study of the Operation of the Surface Waters Pollution Act), Stichting Reinwater, Amsterdam, 1990, p.28.

7 **See** Uitspraak van de Voorzitter van de Afdeling Geschillen van Bestuur Raad van State, 8 April 1992, no. B 05.91.0126 (mr. Van Dijk).

8 **See** Teunissen, **supra** note 6, at 4.

9 **See** WVO, Art. 31(3); Teunissen, **supra** note 6, at 7.

10 Hoitink, J., de Kruyf, G. and Vis, M., **Naar een verplicht milieuverslag. Biedt milieurapportage meer inzicht in milieuzorg door bedrijven? Onderzoek in Nederland en de Verenigde Staten**. (Toward an environmental report requirement. Do environmental reports offer more insight into environmental care systems for industry? A study in the Netherlands and the United States.) Wetenschapswinkel rechten, Rijksuniversiteit Utrecht, 1991, p. 21.

11 Schmit, H., "Rijkswaterstaat heeft geen zicht op lozingen", in **Trouw**, June 19, 1991, **reprinted** in Hoitink, **supra** note 10, at 74.

12 **See. e.g.**, Fangmann, H., Criminal Enforcement of Environmental Legislation, in **International Enforcement Workshop, Proceedings**, Vol. I, pp. 129-140 for a description of the role of the public prosecutor and Teunissen, **supra** note 6, at 29.

13 Personal communication. J. Rutteman, Stichting Reinwater, June 29, 1992.

14 Hoitink, **supra** note 10, at 44.

15 **See, e.g.**, Teunissen, **supra** note 6, at 12-25.

16 33 U.S.C. section 1319.

17 Art. 1a; Hoitink, **supra** note 10, at 21; Teunissen, **supra** note 6, at 27-29.

18 Wet van 31 oktober 1991, Stb. 703.

19 Wabm, Art. 57.

20 Wabm, Art. 58.

21 Hoitink, **supra** note 10, at 21.

22 33 U.S.C. section 1365(b).

23 **See** Teunissen, **supra** note 6, at 30-33.

24 **See** Fangman, **supra** note 12, at 135; Teunissen, **supra** note 6, at 27.

25 **See Stichting Reinwater v. N.V. Sopar**, President rechtbank Middelburg, Nr. 24/1991, in 1991 **Milieu en Recht** at 357; and **Stichting Reinwater v. Carcoke S.A.**, President rechtbank Middelburg, Nr. 82/1992.

26 **See** Tweede Kamer der Staten-Generaal, 21 137 nr. 26 (28 May 1990); 22 343 nr. 2 (10 October 1991).

27 **See** Rijnproces, Hoge Raad, 23 September 1988, in 1989 **Milieu en Recht** at 24.

28 Directive on Freedom of Access to Information on the Environment, 90/313/EEC, OJ L 158, June 23, 1990.

29 Directive on the Assessment of the effects of certain public and private projects on the environment, 85/337/EEC, OJ L 175, July 5, 1985.

CITIZEN PARTICIPATION IN U.S. ENVIRONMENTAL ENFORCEMENT

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SUMMARY

This paper examines and assesses the advantages and disadvantages of the roles that private citizens play in the enforcement of federal environmental laws in the United States. One of the fundamental goals of environmental enforcement in the United States is to achieve widespread compliance with environmental laws and regulations among the members of the regulated community. The government has only limited resources with which to achieve its compliance goals. Therefore, the government consistently must look for methods by which to leverage its existing resources, in order to foster compliance without expending large amounts of its limited resources. In general, citizen participation in environmental enforcement has assisted the government in reaching its goals with respect to compliance while at the same time allowing the government to conserve its resources.

Citizen suits, however, do present certain challenges for the government. This paper places particular emphasis on citizen suits filed in federal court against alleged violators of the environmental laws. Citizen suits are the form of citizen involvement in environmental enforcement that can potentially create the greatest difficulties for the government, as these suits provide citizens with the opportunity to act in a prosecutorial role, one that is traditionally reserved for government enforcement personnel. Although there are inherent tensions in a system that requires the government to share enforcement authority with private citizens, citizen suits in the United States have augmented government enforcement efforts in the past and are likely to do so in the future. In general, citizen participation in the environmental enforcement process promotes compliance with the law and effectively supports the United States' environmental enforcement efforts.

1 BACKGROUND

Government enforcement of the United States' environmental laws is achieved through a cooperative effort between federal, state, and local governments. The United States Environmental Protection Agency (EPA) is the federal agency with primary responsibility for enforcing U.S. environmental laws, although other federal agencies also enforce environmental statutes.[1]

EPA is based in Washington, D.C. and includes an Office of Enforcement which directs and advises the other offices within EPA on enforcement matters. The Office of Enforcement also oversees the handling of enforcement cases, and develops and implements national enforcement policy. Ten EPA Regional offices are responsible for carrying out enforcement activities on a day-to-day basis. These regional offices oversee and financially support state enforcement programs, as well as implement federal enforcement programs. In addition to EPA Headquarters and the Regional offices, EPA also has a National Enforcement Investigations Center (NEIC) located in Denver, Colorado. NEIC provides technical expertise to the Agency and manages an investigative unit that assigns investigators to work in the regional offices.

In addition to EPA, the Department of Justice plays an integral role in federal enforcement. The Department of Justice is responsible for handling enforcement cases in the federal courts. The cases are developed by EPA legal and program offices and are then referred to the

Department of Justice. After receiving a case referral from EPA, the Department of Justice determines whether the case should be filed in federal court. If a complaint is filed in federal court, the Department of Justice represents the government in the action against the alleged violator. EPA continues to work closely with the Department during all stages of the litigation.

A large portion of environmental enforcement in the United States is handled by state governments rather than by EPA and other federal entities. The federal environmental laws authorize state governments to implement federal environmental programs in their states, but generally state programs first must be approved by the federal government for consistency with federal requirements. The states implement the national laws and regulations by issuing their own rules and permits. In turn, states may delegate authority for enforcing environmental laws to their county and city governments. In addition, many states have independently authorized environmental programs to regulate the disposal of pollutants into the air, water and land.

Even if a state has been delegated authority to implement a federal enforcement program, the federal government retains the ability to take enforcement measures. As a matter of policy, if a state fails to respond to a significant enforcement concern in a "timely and appropriate" manner, EPA will take enforcement action. EPA also will step in when there is a violation of an EPA order or consent decree, or in the event that a particular case involves issues of national concern or precedent. In addition, EPA assists states that have been delegated authority to implement federal programs by providing training to state personnel, reviewing state enforcement strategies, and overseeing state inspection programs.[2]

In addition to the government entities that handle environmental enforcement, private citizens play an important role in enforcing the United States environmental laws. Citizens participate in several ways. First, citizens assist the government in identifying violations of the laws. Second, citizens can provide comments on settlements between the government and violators of the environmental laws that are reached in enforcement cases. Third, citizens can bring enforcement actions on their own against alleged violators of the environmental laws. Citizens also may bring actions against the government for its failure to perform mandatory duties that are required under federal environmental statutes.[3]

This paper will focus primarily on the role of citizens in bringing enforcement actions against alleged violators, because this powerful form of citizen participation in enforcement has been formally established by Congress in the federal environmental laws. In addition, citizen suits can present unique challenges for government enforcement personnel who, absent specific statutory authority, traditionally have exclusive authority to bring enforcement actions. However, before examining citizen suits in detail, a few words should be said about the valuable role that citizens can play in detecting violations, and the role that citizens play in approving settlements in enforcement cases.

2 CITIZENS' ROLE IN IDENTIFYING VIOLATIONS

Citizen involvement in identifying violations of the environmental laws is an integral part of environmental enforcement in the U.S., and serves to assist the government in achieving compliance with the environmental laws and regulations. Citizens are often the most able witnesses to observe and identify violations of the law or conditions which may present a threat to the human or natural environment in the vicinity of their homes or work places. Because citizens are in close and constant proximity to sources of pollution they are often the best sources of information. Citizens are particularly likely to detect quickly any new sources of pollution or changes in emissions and discharges in the areas in which they live and work.

Furthermore, given the limited resources available to the government for use in inspecting facilities owned by the regulated community, reports from the public can be of considerable assistance in identifying violations. Although many EPA enforcement actions are based on data that the regulated community is required by statute to submit to the government, detection of violations through inspections and other means that do not involve self-disclosure is a crucial element of a successful enforcement program. EPA is responsible for ensuring compliance in an extremely large regulated community. However, due to budgetary constraints, EPA is able to

employ only a limited number of federal enforcement inspection personnel. For example, EPA has a total of approximately 1850 technical personnel that are trained to inspect facilities. In addition, by the end of this year EPA expects to have a total of 76 criminal investigators and nearly 50 civil investigators.[4] Individual states also employ their own inspectors.

To maintain the confidence of the public, the government is committed to following up on reports received from citizens, and many citizen reports are difficult to verify and, therefore, do not lead to enforcement actions. Nevertheless, citizen reports of violations and environmental threats are valuable and outweigh the cost of processing the information that is provided to EPA and the states. At this time, statistics are not available on the total number of citizen reports that are received each year by Headquarters, the Regional offices, and the state environmental agencies, or the number of reports that lead to prosecutions, civil or criminal convictions or the imposition of civil penalties. However, anecdotal information is available. Recently, in the case of United States v. Goodner Brothers Aircraft, Inc., No. 90-20031-01 (W.D. Ark. 1991) a citizen's tip led to the conviction of the owner of an aircraft refurbishing company under two federal statutes. A citizen observed that two men were dumping creamy beige toxic-smelling waste into a ravine located on a nearby farm. The owner of the farm assured the citizen that he was aware of the activity and that there was no cause for concern. Nevertheless, the citizen reported the violation to EPA. EPA investigators were able to establish that the owner of the farm was dumping waste containing paint removers and old paint from his aircraft refurbishing business into three pits on the farm. A total of approximately 25 tons of waste had been dumped in violation of the Comprehensive Environmental Response, Compensation and Liability Act and the Resource Conservation and Recovery Act.[5]

In addition to producing concrete enforcement benefits such as producing leads for enforcement cases, citizen participation in identifying violations has certain other less tangible but equally valuable results. Citizen participation helps to make environmentally responsible behavior part of the fabric of United States' society, and inspires citizens to believe that they can play a significant role in maintaining a clean and safe environment through their own actions and through reporting those individuals and corporations that do not respect and adhere to the environmental laws. This yields enormous benefits in the context of citizens finding responsive action from democratic government.

Furthermore, citizen participation in reporting violations can have a significant deterrent effect on polluters. If potential violators know that they not only have to be concerned about the government detecting their violations but that citizens, including the average citizen who lives or works next door, are also on the look out for illegal emissions and discharges, potential violators are further encouraged to comply with the environmental laws. Therefore, increased deterrence also results from citizen participation in detecting violations.

Accordingly, EPA encourages active citizen participation in identifying and reporting potential violations of the environmental laws through several means. As a general matter, decisions can be made to make information available to the public that citizens could not normally obtain or that would require substantial time and effort to obtain. For example, EPA makes available to the public its list of significant violators of the Clean Air Act. More formal ways of encouraging citizen participation also exist. For example, EPA publications are made readily available to the public which outline the steps that private citizens should take when they believe that they have detected a violation of the environmental laws. The EPA publications emphasize the importance of documenting all observations in writing and, if appropriate, documenting the potential violations on film. These EPA publications also provide guidance as to what may constitute a violation under each of the major environmental laws.[6]

EPA publications instruct citizens to pay particular attention to unusual odors; unusually flavored or colored drinking water; new and unusual air emissions (particularly dark air emissions); emissions that burn or sting the eyes, mouth, nose or skin; colored discharges into streams; dead animals or fish in the area of suspected pollution; and dumping of garbage in unusual places or at unusual times. EPA publications also provide contact persons and phone numbers within the government to whom potential violations should be reported.[7]

In addition, citizen participation in identifying violations is encouraged through certain statutory provisions in the federal environmental laws. Section 109(d) of the Comprehensive

Environmental Response, Compensation and Liability Act provides that citizens who furnish information to EPA that leads to the arrest and conviction of any person for a criminal violation of the statute may be given a monetary reward of up to $10,000.[8] EPA anticipates giving the first two awards under the program within the next month. Congress recently added a similar provision to the Clean Air Act which provides that awards may be given for furnishing information that leads to either a criminal conviction or a civil judicial or administrative penalty.[9]

Finally, EPA currently is in the process of establishing a Paid Informant Program. The program would allow EPA to pay individuals for providing information and evidence regarding criminal violations of the environmental laws. EPA is often in the position during the course of an investigation where obtaining critical information or evidence from an individual is essential for establishing a strong enforcement case. In some cases, obtaining this information or evidence, which is not otherwise readily available, may depend upon making a payment to an individual in exchange for the information or evidence. The EPA program will be modeled on the programs developed by other federal law enforcement agencies.

3 CITIZEN PARTICIPATION IN SETTLEMENTS

Citizens also play a role in enforcement by commenting on settlements reached between the government and alleged violators in environmental enforcement actions. This form of citizen involvement augments the government's limited resources and helps to ensure that appropriate levels of compliance are achieved through enforcement settlements, and that proper steps are taken by violators to correct any damage caused by their violations.

Regulations issued by the Department of Justice mandate that 30 days must be provided for citizens to comment on the terms of any proposed settlement in a federal civil judicial action to enjoin discharges of pollutants into the environment, before the government formally will agree to final entry of the decree in federal court.[10] The comments received by the Department of Justice are filed in federal court. The Department of Justice reserves the right to withdraw or withhold its consent to the proposed settlement if the comments received disclose facts or considerations which indicate that the proposed settlement is "inappropriate, improper, or inadequate." In addition, individual statutes also contain provisions that provide the public with an opportunity to participate in settlements.[11]

Citizen comments on settlements have yielded, on occasion, changed terms, such as an increase in the amount of the penalties paid by a defendant. For example, in the case of United States v. Exxon Corp., in which the Exxon tanker "Valdez" spilled over 11 million gallons of crude oil into Prince William Sound after striking a reef, Alaskan citizens played a key role in the settlement process. Citizens were invited to comment on both the civil and criminal settlements in the case and testified before the Alaskan legislature which had the authority to reject the civil settlement. The first proposed settlement on the criminal charges was rejected by the Federal District Judge. The legislature also rejected the first proposed civil settlement. The settlement that was ultimately reached required Exxon to pay at least $900 million.[12]

Alaskan citizens influenced the terms of the settlement directly and indirectly through their active participation in the settlement process. For example, in response to comments from one group, the National Trust for Historic Preservation, a provision was added to the settlement which provided that funds could be used to restore archeological sites. In addition, the high-level of interest from the citizens undoubtedly helped shape the government's settlement position, and encouraged the government to seek high penalties from Exxon.

In order to encourage citizen participation in settlements, Congress created the Technical Assistance Grant Program (TAG Program) as part of the 1986 amendments to the Comprehensive Environmental Response, Compensation and Liability Act. The purpose of the TAG Program is to foster community involvement by assisting citizens who live near hazardous waste sites to understand cleanup activities, better articulate local concerns, and participate more effectively in the cleanup process.

The TAG Program provides funds for citizen groups to hire independent technical advisors to help them understand and comment on the technical aspects of cleanup decisions that directly

affect their members' health, economic well-being, or enjoyment of the environment. Such technical factors may include analytical profiles of conditions at a site, the nature of the wastes involved, and the types of technology available for performing the necessary cleanup actions.

Grants of up to $50,000 are available to community groups for the purpose of hiring technical advisors, such as epidemiologists and geo-hydrologists, to help citizens understand and interpret site-related technical information. The group, however, must cover 20 percent of the total costs of the project. The use of grant funds must be budgeted by the community group to cover the entire cleanup period. On average, cleanups last six years. Only one TAG Grant may be given for each site on the National Priorities List, which is the list published by EPA of the most serious abandoned hazardous waste sites nationwide that have been identified for possible remedial cleanup. TAG Grants may not be used to develop new information about a site, such as additional sampling of wastes.

The TAG Program has awarded 90 grants, totalling $4.5 million, to grassroots community groups. The TAG Grant Program has become increasingly successful with over half of the grants awarded in the last eighteen months.

It should be noted that in addition to the advantages of citizen participation, certain disadvantages also exist. The primary disadvantage that can result from public participation in settlements is unnecessary delays in entering final enforceable settlements in court. For example, in U.S. v. Amoco Chemical Company et al. (known as the BRIO Refinery Site), comments from the public resulted in substantial delay in entering a final and enforceable settlement in court.

The case involved a 56 acre abandoned chemical refinery outside of Houston, Texas. Based on concerns about the impact of the government's selected hazardous waste incineration remedy, which was to be implemented in the settlement, the citizens who lived next to the Site actively fought the settlement that was agreed upon by the government and the parties allegedly responsible for the contamination. The consent decree memorializing the settlement was lodged in federal court in August of 1989, and citizens were given 30 days to comment on the settlement. The citizens who lived near the site believed that there was evidence of adverse health effects among the neighborhood residents as a result of the contamination at the site, and submitted over 100 comments, incorporating several thousand pages of records and documents, many of which stated that the remedy agreed upon by the government and the alleged violators was inadequate. The comment period was extended twice due to the number of comments submitted. The sheer volume of comments and the technical complexity of the site remedy required over a year's effort to read, summarize, analyze and respond.

Although some minor changes were made in the consent decree, the remedy was not changed. In December of 1990, the government ultimately asked that the court enter the consent decree in its original form. The citizens then attempted to intervene and become formal parties to the proceeding and litigate the question of whether the remedy was adequate. The court finally approved the entry of the consent decree in April of 1991. The citizens then unsuccessfully appealed the court's decision to the court of appeals. In short, admittedly in unusual circumstances, the public participation process delayed remedy implementation by nearly two years.

Despite the delays that can be caused by public comment, citizen participation provides the public with the opportunity to carefully evaluate the remedies that are chosen to address pollution in their communities. Although public comments may not always produce information that results in a modification of a settlement, citizen participation and the threat of serious challenge increases the pressure on violators to obey the environmental laws, and increases their level of public accountability. Citizen participation also helps to hold the government accountable to the public and provides the government with negotiating leverage, because a settlement must be reached that will be acceptable not only to the governmental regulators, but also to the public. Further, the openness of the process which comes with public accountability yields an aura of integrity and respectability which is critical to maintaining the efficacy of the enforcement program.

4 CITIZEN SUITS

Citizen suits against alleged violators of the environmental laws present far more complicated issues with respect to citizen involvement in enforcement. Despite the problems that can arise, however, citizen suits have proven overall to be a successful compliment to government environmental enforcement activity and have served to assist the government in increasing compliance levels in the regulated community.

4.1 Overview and Purpose of Citizen Suits

Most of the current United States environmental statutes include citizen suits provisions. These are statutory provisions that allow private citizens, as opposed to a state or the federal government, to sue polluters for violations of environmental laws in the federal district courts. These provisions also allow citizens to sue the government in the federal courts of appeals for failing to take nondiscretionary acts that are mandated by statute.

Citizen suits provisions originated in the Clean Air Act of 1970 and subsequently were adopted in most other environmental statutes, including the Clean Water Act, the Resource Conservation and Recovery Act, the Toxic Substances Control Act and the Comprehensive Environmental Response Compensation and Liability Act.[13] Only the Federal Insecticide Fungicide and Rodenticide Act does not include citizen suits provisions.

The scope of authority granted under citizen suits provisions is worded differently under each federal statute. The statutes generally provide that citizens may sue for violations of any statutory standard, limitation, or condition and for violation of orders issued by EPA.[14] In addition, some statutes grant additional authority. For example, the Resource Conservation and Recovery Act also authorizes citizens to bring suits to correct imminent and substantial endangerment to health or the environment.

The relief that can be obtained also varies under each statute. Citizen suits provisions generally provide citizens with an action for prospective injunctive relief. Originally, only the Clean Water Act provided that penalties could be imposed in citizen suits.[15] Legislative amendments to the Resource Conservation and Recovery Act and the Clean Air Act now provide that penalties may be imposed in citizen suits under those statutes.[16] Penalties also may be imposed under the citizen suits provisions of the Comprehensive Environmental Response Compensation and Liability Act and the Emergency Planning and Community Right to Know Act.[17]

Nevertheless, the statutes are relatively similar in nature and the authorizing provisions of one statute are representative of the citizen suits provisions in the other environmental statutes. For example, Section 304 of the Clean Air Act provides:

> any person may commence a civil action on his own behalf -
>
> (1) against any person (including (i) the United States, and (ii) any other governmental instrumentality or agency to the extent permitted by the Eleventh Amendment to the Constitution) who is alleged to be in violation of (A) an emission standard or limitation under this chapter or (B) an order issued by the Administrator or a State with respect to such a standard or limitation,
>
> (2) against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator, or
>
> (3) against any person who proposes to construct or constructs any new or modified major emitting facility without a permit required under part C of subchapter I of this chapter (relating to significant deterioration or air quality) or part D of subchapter I of this chapter (relating to nonattainment) or who is alleged to be in violation of any condition of such permit.

> The district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce such an emission standard or limitation, or such an order, or to order the Administrator to perform such act or duty, as the case may be, and to apply any appropriate civil penalties (except for actions under paragraph (2)). The district courts of the United States shall have jurisdiction to compel (consistent with paragraph (2) of this subsection) agency action unreasonably delayed, except that an action to compel agency action referred to in section 7607(b) of this title which is unreasonably delayed may only be filed in a United States District Court within the circuit in which such action would be reviewable under section 7607(b) of this title. In any such action for unreasonable delay, notice to the entities referred to in subsection (b)(1)(A) of this section shall be provided 180 days before commencing such action.[18]

The intent of Congress in enacting citizen suits provisions in most of the federal environmental laws was two-fold. First, Congress intended that citizen suits would impel government action. The Senate Report on the Clean Air Act of 1970 states: "Government initiative in seeking enforcement under the Clean Air Act has been restrained. Authorizing citizens to bring suits for violations of standards should motivate governmental agencies charged with the responsibility to bring enforcement and abatement proceedings."[19]

Second, citizen suits also were intended to augment federal and state enforcement activity. This objective was based in part on the understanding that there always will be a finite amount of resources available for government enforcement. For example, with respect to the Clean Air Act citizen suits provisions, Senator Edmund Muskie, a principal author of the original Clean Air Act, stated that "it is too much to presume that, however well staffed or well intentioned these enforcement agencies, they will be able to monitor the potential violations" under the Clean Air Act.[20] Similarly, Senator Gary Hart stated: "In legislation of this type, we will find very likely noncompliance which in number or degree are far beyond the capacity of the Government to respond to."[21]

More recently, the author of amendments to the Resource Conservation and Recovery Act citizen suits provision, Senator George Mitchell, explained that his amendment allowing citizens to sue to abate imminent and substantial endangerments to health or the environment was needed on the following grounds:

> Only EPA can sue to abate an imminent hazard under current law. If EPA does not act, the endangerment continues. In light of the thousands of known hazardous waste sites across this country, this simply does not make sense. The Environmental Protection Agency clearly does not have the resources to deal with all of these sites, nor do the States. Citizen suits to abate imminent hazards can expect the national effort to minimize these very real threats to our well-being.[22]

The federal courts also have recognized that citizen suits provisions were intended, in part, to supplement government enforcement efforts. In NRDC v. Train, the court held that "the citizen suits provision reflected a deliberate choice by Congress to widen citizen access to the courts as a supplemental and effective assurance that the Act would be implemented and enforced."[23]

4.2 Citizen Suits in Practice

While United States' laws authorize citizen suits to be brought by an individual or his or her attorney, in practice these are typically filed by one of several nonprofit organizations that have taken the lead in developing and litigating citizen suits. For example, the Natural Resources Defense Council has played a key role in bringing citizen suits under the Clean Water Act. In addition, nonprofit groups such as the Sierra Club Legal Defense Fund, the Environmental Defense Fund, the Chesapeake Bay Foundation, Trial Lawyers for Public Justice, and the Atlantic States Legal Foundation also bring numerous actions under the citizen suits provisions of the environmental laws. Some private law firms also dedicate substantial portions of their practices to litigating citizen suits.

Most of the early citizen suits filed during the 1970s were brought to compel government agencies to take actions that they had failed to take but that were required by statute.[24] Few suits were brought to enforce environmental laws against alleged violators in the years immediately following the enactment of the citizen suits provisions. For example, one study found that from 1978 to 1982 less than ten citizen suits were brought annually under the Clean Water Act.[25]

During the 1980s, the focus of citizen suits shifted and an increasing number of actions were brought under the citizen suits provisions against alleged violators of the environmental laws. Some commentators have argued that the increase in citizen suits filed against alleged violators can be attributed to a decline in the number of enforcement actions filed by the government. Although a decline in federal enforcement may explain the increase in the number of citizen suits filed in the early 1980s, citizen suits continue to be filed against alleged violators despite the fact that enforcement levels have consistently increased over the last few years. For example, in fiscal year 1991 EPA imposed a record number of fines and referred a record number of cases to the Department of Justice for filing.

Suits under the Clean Water Act for violations of national pollutant discharge elimination system (NPDES) permits are the most common. Clean Water Act suits are particularly popular because information on violations is readily available to the public in the form of discharge monitoring reports that the regulated community is statutorily required to submit to EPA. One report estimated that by 1987, there were more than 100 filings per year under the Clean Water Act citizen suits provisions, and more than 800 cases were pending in the federal courts. In addition, hundreds of other cases were pending under the citizen suits provisions of other statutes.[26] The United States Department of Justice estimates that in fiscal year 1991 a record number of fines were imposed in citizen suits brought under the Clean Water Act. Specifically, $4,998,132.62 in fines were imposed in fiscal year 1991, as compared to $2,930,196.56 in fiscal year 1990 and $325,241.65 in 1989. By way of comparison, only $164,000 in fines were imposed in Clean Water Act citizen suits in fiscal year 1986.

4.3 Potential Disadvantages of Citizen Suits

The principal disadvantage of citizen suits is the potential for interference with government enforcement activities. Citizen suits potentially could interfere with ongoing or planned enforcement actions. In addition, citizens potentially could file ill-founded actions that the government normally would not choose to pursue, and which could establish unfavorable judicial precedent that could hinder the government's subsequent enforcement activities.

Although these concerns are not wholly without merit, in general, the problems that have arisen with respect to citizen suits have not proven to be a significant impediment to the government's enforcement efforts. In enacting the citizen suits provisions, Congress attempted to alleviate the potential problems for the government through several mechanisms, including notice requirements and attorney fees awards. These mechanisms have been successful for the most part, and the disadvantages that remain for the government are outweighed by the advantages that private enforcement activity brings to environmental enforcement in the United States.

4.3.1 Interference with Government Enforcement Activities

4.3.1.1 Pending Government Enforcement Actions

The citizen suits provisions in the federal laws typically constrain citizen participation in government enforcement efforts. Typical of these provisions is Section 304(b)(1)(B) of the Clean Air Act which states:

> No action may be commenced -
>
> if the Administrator or State has commenced and is diligently prosecuting a civil action in a court of the United States or a State to require compliance with the standard, limitation, or

order, but in any such action in a court of the United States any person may intervene as a matter of right.[27]

The requirement that a citizen suit cannot be filed if the government already has instituted an enforcement action was intended to allow the government to perform its enforcement work without interruption from private citizens. Senator Mitchell explained during the process of amending the Resource Conservation and Recovery Act that "[t]he provision is structured carefully . . . to insure that citizen suits do not interfere with ongoing Federal or State enforcement efforts."[28]

In order to ensure that citizens are not unduly restricted from participating in environmental enforcement because of an existing government enforcement action, Congress provided under most of the citizen suit provisions that citizens can intervene in government enforcement actions as a matter of right. Citizen intervention in government enforcement actions is governed by Rule 24(a) of the Federal Rules of Civil Procedure which requires that an intervenor must have standing to sue and that intervention must be timely.

A citizen also may intervene as a matter of right in some cases, even when a citizen suit provision does not authorize such intervention. In order to intervene as a matter of right, a citizen is required to have an interest relating to the property or transaction at issue in the litigation. The disposition of the litigation also must be able potentially to impair or impede the citizen's ability to protect his or her interest.[29] Intervention as a matter of right is not permitted if the citizen's interest is adequately represented by existing parties. If intervention is not permitted as a matter of right, a citizen still may intervene pursuant to Rule 24(b) of the Federal Rules of Civil Procedure which provides for permissive intervention. Pursuant to this Rule, under certain circumstances, a citizen may be permitted to intervene if he or she has a claim or defense that has a question of law or fact in common with the government's action.

Some courts have interpreted the citizen suits provisions to bar citizen suits when a government administrative enforcement action is pending, if the administrative action closely resembles a judicial action. First, courts examine whether the remedies available to the government in the administrative action are similar to those that would be available in a court action, particularly with respect to the imposition of penalties. Second, courts examine whether the same procedures exist in the administrative proceeding as in a judicial proceeding, particularly with respect to whether citizens may intervene as a matter of right in the administrative proceeding.[30] Furthermore, some statutes provide that citizen suits are barred when the government has undertaken certain administrative enforcement activities.[31]

The question of what constitutes "diligent prosecution" of an enforcement action by the government has been litigated in federal court on numerous occasions. Courts generally have looked carefully at whether the government's activities actually constitute "diligent" enforcement. For example, in Gardeski v. Colonial Sand and Stone Co.,[32] a settlement was reached between the government and the violator in a Clean Air Act case brought for illegal emissions of dust and particles. However, the consent order subsequently was violated by the defendant, and was not enforced by the state for two years while the state tried to seek voluntary compliance. The court held that the government's actions in the case did not constitute diligent prosecution.[33] Similarly, in New York Coastal Fisherman's Association v. New York Sanitation Department,[34] the court ruled that the State was not diligently prosecuting the City of New York to force the cleanup of a city landfill, despite the existence of two consent orders, because a permanent plan to eliminate illegal leachate discharges from the Site had not materialized.

The courts undoubtedly will continue to wrestle with what type of government actions bar citizen suits. Although it is particularly difficult to define "diligent prosecution," the courts have been on the right track in taking a close look at the government's activities before barring a citizen suit. Although it is crucial not to interfere unduly with the government's enforcement efforts, often lack of diligent prosecution is a result of inadequate resources with which to follow through on enforcement cases. Furthermore, it is preferable to err on the side of over-enforcement rather than under-enforcement.

4.3.1.2 Notice Requirements

A citizen suit may not be filed in court until notice has been provided to the responsible federal and state agencies, and to the alleged violator. Citizen suits provisions typically provide for a 60 day waiting period after notice is provided before the action can be filed. This period is provided to allow the government to step in, as the primary enforcer, and file suit. In some instances, the notice period is longer than 60 days, and in other instances, such as emergency situations, the notice period is waived.[35] EPA has issued regulations which set out in detail, the manner in which notice must be served and the required content of the notice. These regulations generally require that the notice include information that allows the alleged violator to know the standard that it allegedly has violated and the date, place, and nature of the violation.[36]

Judicial interpretation of the notice provisions has varied over time. Some courts initially interpreted the provisions liberally, ruling that the notice requirements did not need to be strictly adhered to prior to filing a suit.[37] However, the United States Supreme Court recently ruled that the notice provisions in the citizen suits provisions are mandatory and that a case should be dismissed if the notice requirements have not been met.[38] In most cases, however, the citizen usually can provide proper notice and refile the suit.[39]

The notice requirements of the citizen suits provisions have served the important function of preventing citizen suits from interfering with planned government enforcement activities. Notice also provides the government with the opportunity to determine whether it, rather than a private citizen, should file a case. The legislative history of the first citizen suits provisions states that the purpose of the notice requirement is "to further encourage and provide for agency enforcement . . . . The time between notice and filing of the action should give the administrative enforcement office an opportunity to act on the alleged violation."[40] In Friends of the Earth v. Potomac Electric Power Co., the court explained that "[t]he purpose of the notice provision is to allow the Administrator and other officials to rectify inaction, and thus obviate the need for judicial recourse."[41]

The notice provisions also have provided the government with the opportunity to stay apprised of citizen suits activity and use the information to gauge its own enforcement priorities and agenda. For example, in May of 1984 after more than 200 citizen suits had been filed under the Clean Water Act in the previous year, the Administrator of EPA directed that the Agency examine the implications of the large number of filings. In a press conference the Administrator reportedly stated that "he was particularly troubled that the suits are being brought in areas where EPA's own enforcement 'should be more vigorous' or where violations have been overlooked because companies are on compliance schedules."[42]

The one disadvantage of the notice requirements is the length of the waiting period. In an emergency situation, 60 days may be too long a period of time to wait for formal initiation of proceedings. In practice, however, 60 days generally is not enough time for the government to develop and file a new enforcement action. It often takes months for EPA to investigate carefully and develop an enforcement case. A formal litigation report also must be prepared to accompany each case that is sent to the Department of Justice for filing in federal court. Furthermore, a formal agreement between EPA and the Department of Justice provides that the Department has up to 60 days after it receives a referral from EPA within which to file a case.[43] vertheless, it should be noted that citizens often do not file their suits immediately after the 60 day waiting period has expired, but instead continue negotiations with the alleged violator. The government may be involved in these negotiations and is not foreclosed even after the 60 days has expired from taking its own enforcement measures. Furthermore, the government always is permitted to intervene as a matter of right in any
citizen suit. Thus, if the government is unable to bring its own action prior to the filing of a citizen suit, it may intervene in the citizen suit.[44]

4.3.2 Mechanisms for Deterring Nonmeritorious Suits

The concern that citizens may bring ill-founded cases that establish bad precedent for future enforcement actions by the government has been largely unfounded. For the most part,

the citizen suits provisions successfully were crafted to deter unwarranted citizen suits, and suits generally have not been brought for minor violations of the laws.[45] Citizen suits often have set valuable precedent, and some commentators have concluded that citizens have sought and obtained higher civil penalties than the government for the same violations.[46]

Although it is difficult to determine with any certainty the reasons that nonmeritorious suits have not been a significant problem, factors that may have deterred the filing of unnecessary citizen suits include the following: 1) attorney fee awards may be granted by the courts against citizens who bring ill-founded suits; 2) several citizen suits provisions provide that the courts can require the citizens to post bond; 3) citizens cannot recover damages under the citizen suits provisions.

In drafting the citizen suits provisions, Congress took steps to deter citizens from bringing nonmeritorious suits by providing that costs, including expert witness and attorney fees, can be awarded both for and against citizens in appropriate circumstances. The award of attorney fees is an exception to the general American rule that each party must pay its own litigation costs, regardless of which party prevails in the litigation. See Alyeska Pipeline Service Co. v. Wilderness Society, 421 U.S. 240 (1975).

The provisions for the award of attorney fees serve, therefore, to deter citizens from bringing nonmeritorious suits, but also to encourage citizens to bring strong cases that they may not otherwise be able to afford to litigate. As explained by one court, Congress' goal was to authorize fee awards "which are adequate to attract competent counsel, but which do not produce windfalls to attorneys."[47]

Typical of the attorney fees provisions is the following language found in the Clean Air Act:

> The court, in issuing any final order in any action brought pursuant to subsection (a) of this section, may award costs of litigation (including reasonable attorney and expert witness fees) to any party, whenever the court determines such award is appropriate.[48]

Another statutory mechanism that may have assisted in deterring citizens from bringing frivolous suits is the language found in several of the citizen suits provisions that enables courts to require citizens to post bond in suits brought for injunctive relief. These provisions typically provide:

> The court may, if a temporary restraining order or preliminary injunction is sought, require the filing of a bond or equivalent security in accordance with the Federal Rules of Civil Procedure.[49]

Although there is no legislative history on these provisions, at least one commentator has concluded that the provisions were included "as part of a package to mollify critics of citizen suits who feared they would flood the courts with ill-founded cases."[50]

Frivolous suits also may have been deterred because there is no right of private recovery in the citizen suits provisions. Civil penalties recovered against violators must be deposited in the United States Treasury.[51] Citizens however, still are able to recover damages caused by a violator through other statutory and common law remedies, but citizen suits do not provide a vehicle by which citizens can obtain damages. However, it should be noted that citizen suit settlements may require that, in lieu of paying civil penalties, a violator sponsor an environmental project, the benefits of which may inure directly to the citizens who brought the action.

In sum, citizen suits have not unduly interfered with the United States government's enforcement activities. For the most part, citizen suits have created favorable precedent and have been brought for significant violations of the law. This lack of interference may be attributable, in part, to the structure and mechanisms set out in the citizen suits provisions. Although a certain amount of government resources must be allocated to tracking citizen suits activity, this has not been unduly burdensome and has allowed the government to assess its own enforcement priorities.

5 CONCLUSION

Citizen participation in the enforcement of environmental laws in the United States has proven to be quite successful. Although undoubtedly cases exist in which citizen participation has hindered or interfered with government enforcement efforts, the disadvantages of citizen participation are outweighed by the numerous advantages. The resources available for environmental enforcement are perennially limited, and it is unlikely that the government will ever be able to enforce the laws against every violator. Thus, citizen participation has been a welcome supplement to the government's enforcement efforts. Citizen enforcement efforts, like the government's own enforcement activities, also have served to deter potential violators and increase levels of compliance.

Citizen participation also serves to increase the public's awareness of environmental issues, and increases citizens' sense of responsibility for ensuring compliance with the environmental laws. Citizens' access to the court system also serves as a safety valve, guaranteeing the opportunity to seek redress in a judicial forum for environmental offenses. Wide spread environmental compliance in the regulated community and responsible environmental practices by the general public only can be achieved if citizens believe that they are expected to play a role in protecting the environment. Citizen participation in environmental enforcement helps to achieve these goals.

NOTES

1. For example, the National Oceanic and Atmospheric Administration (NOAA) administers parts of the Ocean Dumping Act and the Coastal Zone Management Act. NOAA also is responsible for enforcing the natural resource damage provisions of the Comprehensive Environmental Response Compensation and Liability Act and the Oil Pollution Act. The Department of Interior (DOI) administers wildlife statutes such as the Endangered Species Act and the Migratory Bird Treaty Act. DOI also enforces natural resource damages provisions under the Comprehensive Environmental Response Compensation and Liability Act. In addition, the United States Coast Guard enforces portions of the Oil Pollution Act.

2. The role of the states in enforcement can not be understated, and is highlighted by the fact that approximately 70 percent of all enforcement actions are taken by states rather than by the federal government. Furthermore, as of 1988, between 80 and 90 percent of all inspections were conducted by state government personnel. See Environmental Enforcement A Citizen's Guide, U.S. EPA March 1990 at 2.

3. Citizens also are authorized to review in federal court regulations adopted by EPA which are not consistent with federal law. See, e.g., Section 704 of Administrative Procedure Act, 5 U.S.C. Section 704; Section 113 of the Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. Section 9613.

4. The Pollution Prosecution Act of 1990 directed the Agency to hire 50 additional civil investigators by 1991 and to have a total of 200 criminal investigators on board by 1995.

5. The convictions under the Resource Conservation and Recovery Act subsequently were overturned on appeal, because the regulations that were violated had not been issued in accordance with proper procedures. See United States v. Goodner, No. 91-2466 (June 4, 1992).

6. See The Public's Role in Environmental Enforcement, U.S. EPA, March 1990; Environmental Enforcement A Citizen's Guide, U.S. EPA, March 1990.

7. Id.

8. 42 U.S.C. Section 9609(d); 40 C.F.R. Part 303 (1991).

9. 42 U.S.C. Section 7413(f).

10. 28 C.F.R. Section 50.7 (1991).

11. See, e.g., Section 7003(d) of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6973(d); Section 122(d)(2) of the Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. Section 9622(d)(2).

12. No. A-91-082-CV (D.C. Alaska 1991); see also Environment Reporter, May 3, 1991 at 4; Environment Reporter, October 11, 1991 at 1553.

13. Clean Air Act, 42 U.S.C. Section 7604; Federal Water Pollution Control Act, 33 U.S.C. Section 1365; Marine Protection, Research and Sanctuaries Act (Ocean Dumping Act), 33 U.S.C. Section 1415(g); Noise Control Act, 42 U.S.C. 4911; Endangered Species Act, 16 U.S.C. Section 1540(g); Safe Drinking Water Act, 42 U.S.C. Section 300j-8; Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act), 42 U.S.C. Section 6972; Toxic Substances Control Act, 15 U.S.C. Section 2619; Surface Mining Control and Reclamation Act, 30 U.S.C. Section 1270; Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. Section 9659; Emergency Planning and Community Right to Know Act, 42 U.S.C. Section 11046.

14. See J. Miller and Environmental Law Institute, Citizen Suits: Private Enforcement of Federal Pollution Control Laws 7 n. 20 (1987).

15. 33 U.S.C. Section 1365(a).

16. 42 U.S.C. Section 6972(a); 42 U.S.C. Section 7604(a).

17. 42 U.S.C. Section 9659; 42 U.S.C. Section 11046.

18. 42 U.S.C. Section 7604.

19. Friends of the Earth v. Carey, 535 F.2d 165, 172 (2d Cir. 1976) (quoting S. Rep. No. 91-1196, 91st Cong. 2d Sess. 35-36 (1970)).

20. See NRDC v. Train, 510 F.2d 692, 727 (D.C. Cir. 1975) (quoting A Legislative History of Clean Water Act Amendments of 1970 at 280-81).

21. Id. at 730.

22. D. Riesel, Citizen Suits, and the Award of Attorneys Fees in Environmental Litigation, American Law Institute-American Bar Association course materials at 838 n.6 (June 20-24, 1988) (quoting 130 Cong. Rec. 59151 (daily ed. July 25, 1984)).

23. NRDC v. Train, 510 F.2d at 700.

24. See, e.g., NRDC v. Train, 519 F.2d 287 (D.C. Cir. 1975); New England Legal Foundation v. Costle, 632 F.2d 936 (2d Cir. 1980), supplemental opinion, 666 F.2d 30 (2d Cir. 1981).

25. See Environmental Law Institute, Citizen Suits: An Analysis of Citizen Enforcement Action Under EPA-Administered Statutes III-10 (1984).

26. See L. Jorgenson & J.J. Kimmel, Environmental Citizen Suits: Confronting the Corporation (1988); see also Environmental Law Institute, Citizen Suits: An Analysis of Citizen Enforcement Actions Under EPA-Administered Statutes (1984).

27. 42 U.S.C. Section 7604(b)(1)(B).

28. D. Riesel, Citizen Suits, and the Award of Attorneys Fees in Environmental Litigation, American Law Institute-American Bar Association course materials (June 20-24, 1988)(quoting 130 Cong. Rec. 59150 (daily ed. July 25, 1984)).

29. In rare cases, non U.S. citizens have intervened in U.S. enforcement cases. For example, in United States v. Hooker Chemicals and Plastics Corp., 101 F.R.D. 444 (1984), the Province of Ontario and the Minister of the Environment moved to intervene in an ongoing enforcement action. Ontario alleged that a threat existed to the health of persons drinking water or consuming fish caught in Lake Ontario and the Niagara River due to violations of the Clean Water Act and the Resource Conservation and Recovery Act by Hooker Chemical and Plastics Corporation in the United States. The Court reasoned that Ontario's interest were not adequately represented by the United States Government in the action against the company, because the Government might place greater emphasis on protection of U.S. drinking water than on protection of Canadian drinking water. Ontario was not permitted to pursue claims under the citizen suits provisions, however, but was permitted to pursue its common law nuisance claim.

30. See, e.g., Student Public Interest Research Group of New Jersey, Inc. v. Fritzsche, Dodge & Olcott, 759 F.2d 1131, 1137 (3d Cir. 1985); Baughman v. Bradford Coal Co., 592 F.2d 215, 217 (3d Cir.), cert. denied, 441 U.S. 961 (1979).

31. See, e.g., Emergency Planning and Community Right to Know Act, 42 U.S.C. Section 11046(e)(Barring citizen suits if EPA is diligently pursuing an administrative order); Clean Water Act, 33 U.S.C. Section 1319(g)(6)(B)(if government has issued a final order and violator has paid penalty in administrative proceeding violator is not liable for additional civil penalties in a citizen suit that is filed after commencement of administrative proceeding); Resource Conservation and Recovery Act, 42 U.S.C. Section 6972 (citizen suits barred if EPA or state is diligently pursuing abatement action or cleanup under Comprehensive Environmental Response Compensation and Liability Act).

32. 501 F. Supp. 1159 (S.D.N.Y. 1980).

33. See also Sierra Club v. SCM Corp. 572 F. Supp. 828, 831 n. 3 (W.D.N.Y. 1983)(existence of consent order usually indicates diligent enforcement but failure to monitor compliance and enforce consent order or to permit new violations to occur can counter this presumption).

34. 772 F. Supp. 162 (S.D.N.Y. 1990).

35. See, e.g., Resource Conservation and Recovery Act, 42 U.S.C. Section 6972(b)(2)(A); Clean Air Act, 42 U.S.C. Section 7604(b).

36. See, e.g., 40 C.F.R. Part 135 (1991); 40 C.F.R. Part 254 (1991).

37. Friends of the Earth v. Carey, 535 F.2d 165, 176 (2d Cir. 1976)("to require that precise formalistic notice be provided to each [state and local agency] is to erect wholly unrealistic barriers to citizen access to the courts as insured by Congress"); National Sea Clammers Assoc. v. City of New York, 616 F.2d 1222, 1226 (3d Cir. 1980), vacated on other grounds, 453 U.S. 1 (1981)(adopting "pragmatic" approach to interpreting sixty day notice provision under which sixty days must elapse prior to district court action on complaint, as opposed to filing of complaint).

38. Hallstrom v. Tillamook County, 493 U.S. 20, 31 (1989), reh'g denied, 493 U.S. 1037 (1990)("the notice and 60-day delay requirement are mandatory conditions precedent to commencing suit under the RCRA citizen suits provisions. . . . As a general rule, if an action is barred by the terms of a statute, it must be dismissed").

39. Id. at 32.

40. Natural Resources Defense Counsel, Inc. v. Train, 510 F.2d 692, 723 (D.C. Cir. 1975)(quoting S. Rep. No. 1196, 91st Cong., 2d Sess. 36-39).

41. 546 F. Supp. 1357, 1361 (D.D.C. 1982);see also National Sea Clammers Association v. City of New York, 616 F.2d at 1226 ("The purpose behind the notice provision, as the legislative history makes clear, was to afford the Environmental Protection Agency an opportunity to remedy the alleged violation prior to judicial action").

42. See Inside EPA, Vol. 5, No. 19, May 11, 1984, at 1, 6-7.

43. See Memorandum of Understanding Between the Department of Justice and the Environmental Protection Agency, dated June 1977.

44. See, e.g., Section 304(c)(2) of the Clean Air Act, 42 U.S.C. Section 7604 ("the Administrator, if not a party, may intervene as a matter of right at any time in the proceeding").

45. See J. Miller, Citizen Suits: Private Enforcement of Federal Pollution Control Laws 13-14 (1987)(citing, Environmental Law Institute, Citizen Suits: An Analysis of Citizen Enforcement Actions Under EPA-Administered Statutes (1984)).

46. See Rethinking Citizen Suits, 8 Temple Envtl. L. & Tech. J. 55, 66 (Fall 1989)(citing Boyer & Meidinger, Privatizing Regulatory Enforcement: A Preliminary Assessment of Citizen Suits Under Federal Environmental Laws, 34 Buffalo L. Rev. 833, 835 (1985)).

47. Save Our Cumberland Mountains v. Hodel, 857 F.2d 1516, 1521 (D.C. Cir. 1988)(quoting S. Rep. No. 1011, 94th Cong., 2d Sess. 6 (1976)).

48. 42 U.S.C. Section 7604(d).

49. 42 U.S.C. Section 7604(d).

50. J. Miller, Citizen Suits: Private Enforcement of Federal Pollution Control Laws 62 (1987).

51. Under the 1990 Amendments to the Clean Air Act, penalties are deposited into a special fund in the U.S. Treasury for licensing and other services. The funds may be used by EPA to finance air compliance and enforcement activities.

FROM PUBLIC DISCLOSURE TO PUBLIC ACCOUNTABILITY: WHAT IMPACT WILL IT HAVE ON COMPLIANCE?

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SUMMARY

Governments, industry, and citizen groups are experimenting with different ways to develop, distribute, and use public information to reduce pollution and protect the environment. It is still early to evaluate these rapidly changing information tools. However, it is already clear that a significant expansion is occurring in the role that making information public plays in environmental policy. Earlier stages have incorporated self-monitoring and self-reporting by companies into pollution control legislation in some countries(1) and also introduced "freedom of information" provisions that give the public a route of access to government-held documents. In these laws the emphasis is on "public disclosure" by companies to the government. The public can then request the information. The characteristics of the new information tools are still emerging but they share developing and getting information about sources as well as effects of pollution or degradation to a wide range of users, particularly communities and individuals. They also get data beyond environmental specialists to other managers in companies and government.

This paper discusses three environmental information tools which move on the spectrum from public disclosure to public access including in some cases closer to public accountability through a "right-to-know": 1) public inventories of uses and release of toxic chemicals based on the "right-to-know"; 2) Eco-Audits, as proposed by the Commission of the European Communities (EC), including a public environmental statement; 3) Eco-labelling programs that identify products with preferable environmental characteristics. Table 1 highlights provisions of these tools. Although this paper does not discuss accident information tools in depth, this area is one of the seed beds of accountability and "right-to-know".

The three information tools discussed are on the cutting edge of clarifying our understanding of the sources of environmental problems and how to solve them in a sustainable way. These three tools are beginning to provide a means of public accounting for the contribution to pollution and habitat degradation by specific facilities and products. They are helping put the emphasis on reducing at the source the environmental impacts of the "whole" facility and the entire "life-cycle" of a product.

At the same time, environmental information tools are just one instrument of environmental policy. Thus decisions about their use are caught up in debate about the appropriate roles of companies, governments, and citizen groups in developing and implementing environmental policy and the potential of these tools for misuse. Citizens point out that some companies advertise extravagant environmental claims for their products, sometimes based on methodologies that are still being developed. They are concerned that information and voluntary approaches might undermine enforcement. Companies fear provision of data to citizens will endanger their market share or increase the threat of attack in the media or prosecution. Enforcers and technical assistance staffers in government programs each fear that their program will be undermined by the other program's approach. The debate often focuses on access to information and becomes entangled in choosing the appropriate mix of "carrot" and "stick" measures.

1 FROM PUBLIC DISCLOSURE TO PUBLIC ACCOUNTABILITY?

Disclosure provisions can help to create a climate that deters violation of environmental laws and encourages compliance. Self-monitoring, reporting, and recordkeeping requirements are an important element in the compliance system in countries such as the United States. Drinking water suppliers sample water and hazardous waste managers keep track of waste shipments and monitor the groundwater. They both keep records that are used by inspectors to achieve compliance. The U.S. Freedom of Information Act was adopted in 1966. By using it, citizens can now obtain these and other data. Plans are also underway to make some of these data available through the National Technical Information Service. The European Community directive on freedom of information goes into effect at the end of 1992. Some member states already have experience with access provisions. The United Kingdom is introducing public registers of monitoring data from its major industrial facilities, for example.

As the statements in Table 2 illustrate, however, governments, industry, and environmental groups are engaged in a debate about taking a broader approach to information policies. Impetus for this shift comes from both the past and the future. Past practices have resulted in severe accidents including Seveso and Bhopal as well as habitat destruction and pollution that has diminished forests and damaged the stratospheric ozone layer. Scenarios of the earth's future foresee a doubled population and economy five times the present size by the middle of the next century. As the global nature of the environment and the economy become more evident, the need for better information and wider participation in decisions at levels from the community to international organizations is also growing.

The EC's introduction to its proposed Eco-Audit regulation notes that in providing information on industrial accidents, the Commission found a "strong public demand for general information . . . on measures to prevent pollution . . . and on emissions from industrial establishments into the environment."[2] Responding to similar pressures, the U.S. Congress adopted an Emergency Planning and Community Right-to-Know Act (EPCRA) in 1986. Although "image" frequently drives corporate action and many managers still argue that the experts should just provide their interpretation of the hazards, some company leaders also recognize that this is not enough. Notes a UNEP industry and Environment Office report prepared with corporate cooperation, a company needs "to provide the public with information on what it is doing to limit the impact of its activities on the environment. This is not about projecting an image but about providing real information to staff, neighbors, environmental groups, consumers, the media, and others to meet the different levels of interest and understanding, taking into account local practices and cultures."

The Sofia Statement, issued at the January 1992 conference of non-governmental organizations in Bulgaria, stressed the need for stringent national environmental legislation and effective monitoring and enforcement. At the same time, participants urged western firms operating in Central and Eastern Europe to act in advance of such legislation by accepting public accountability through information provision and public participation in decision making. NGOs have also emphasized the importance of the right-to-know in statements at meetings in Hungary, Austria, and at the preparatory meetings leading up to the Earth Summit in Brazil. Among many items adopted in Rio in Agenda 21's chapter on toxics was a call for governments, in cooperation with international organizations, to consider adoption of community right-to-know and other public information-dissemination programmes.

2 THREE EXAMPLES OF MOVING FROM DISCLOSING INFORMATION TO PUBLIC ACCOUNTABILITY FOR ENVIRONMENTAL CHOICES

Three examples illustrate how information policy is broadening from disclosure to access and accountability, sometimes in the form of the right-to-know, about sources and effects of pollution and habitat degradation. Two examples relate mainly to industrial facilities and one to products.

2.1 Inventories of toxic chemicals at facilities

The U.S. adopted its Community Right-to-Know Act in the wake of the accidental release of methyl isocyanate in Bhopal, India, that killed 2000 people and injured thousands more. Drawing partly on the EC's directive adopted after the release of dioxin from a pharmaceutical plant in Italy, the U.S. law requires companies to plan for emergencies, provide notification about accidents, and inform citizens about the presence and release of chemicals in their community. Building on experience of labor unions and states such as New Jersey, EPCRA establishes a Toxics Release Inventory (TRI). The TRI is a distinctive information tool in at least three ways.

> Information for citizens. Enhancing the "right-to-know" is the goal of the inventory.[3] In contrast, the U.S. waste law, the Resource Conservation and Recovery Act, generates data to develop a system of cradle-to-grave regulations and to allocate federal funds. The public may obtain the information but that is a secondary purpose. The TRI works in reverse. Its primary purpose is to make the data about the presence and release of chemicals available to the public and government officials. In practice, the TRI data are beginning to provide an accounting system and an impetus for source reduction when combined with the U.S. Pollution Prevention Act and state pollution prevention planning laws.
>
> Information for source reduction and cross-media pollution control. The TRI data are chemical and facility specific. They can be aggregated for a geographic region. The TRI requires companies to report releases to air, water, soil, or underground wells of any of 300 chemicals and 20 chemical categories that it manufactures or processes in quantities of over 25,000 pounds a year or uses in quantities of 10,000 pounds per year. Unlike other EPA databases, the TRI is multi-media. All data are reported in pounds rather than in different units of measure for air and water. In addition, it includes the maximum amounts of chemicals stored during the year, the names and locations of off-site facilities to which toxic wastes were shipped; the treatment or disposal methods used for wastes, along with estimates of their efficiency.
>
> Information distribution by computer. Companies submit the data to states and the federal government, and the federal government makes it available to the public by computer and actively promotes its use. But the federal Environmental Protection Agency has no monopoly on the data. Any one with a personal computer can analyze the data and all kinds of institutions as well as individuals are doing so. "If we don't name the top 50 facilities, Clean Water Action or someone else will--so we put them in. . . . One of the unique features about TRI is that there's no way that EPA can control the spin on this database," comments Warren Muir who has been involved in the production of EPA's national report on TRI data.[4]

More than five years of experience with the national inventory has illuminated both the opportunities and the problems. Although about 23,000 facilities reported 1990 data, non-reporters continue to be a problem. EPA has conducted about 2,330 on-site inspections since 1989 and issued 550 civil complaints and proposed penalties over $16 million.[5] This enforcement effort highlights that reporting is required; it is not voluntary. EPA, companies, and citizen groups are still sorting out what data should be reported. The list of chemicals needs to be expanded to include both other toxic chemicals and other sources of releases besides industrial manufacturers. So far ozone depletors have been added. As of July of 1992, the Pollution Prevention Act requires additional reporting on prevention and recycling activities. However, the data do not yet include the amount of information coming into the facility (the amount purchased or made) which would enable accounting for materials through balancing the inputs and outputs as the New Jersey inventory allows. Nor does the TRI yet include the amount of a substance that goes into products.

The TRI is clearly having some effect on compliance, although this is not a one-to-one relationship because the law is not directly related to existing laws. The chemicals it includes are controlled in different ways under many different laws. Some releases are not regulated under any laws. Much of the TRI's effectiveness is in getting more people in on the action.

- Environmental groups have used it to challenge industries and individual facilities to reduce or stop using toxic chemicals on the TRI. In Silicon Valley, a group worked with the media to highlight the large releases of the electronics industry. The companies reduced these releases, and an industry association now reports its own analysis of the data to the public. In Northfield, Minnesota, residents joined workers in using the TRI data to convince a plant to phase out use of methylene chloride by the year 2000. Workers had been unsuccessful until the data became available and a larger coalition was built.

- Companies themselves have taken the lead in using TRI data. Best known is the pledge of Monsanto's chairman to reduce air releases by 90 percent by 1992 when TRI figures were first released in 1988. Now the Monsanto chemical company also has a 70 percent multi-media waste release reduction program.

- EPA enforcement staff are using TRI data to target inspections at large emitters and identify opportunities to do multi-media inspections or inspections of particular industries. At the same time, exemplifying the tension that exists between compliance and voluntary programs, the data are being used for a voluntary project run by the EPA Office of Pollution Prevention and Toxics in which, as of March 1992, 734 companies had pledged to reduce releases (by either treatment or source reduction) of 17 chemicals by 304 million pounds. The goal is to achieve reductions of 700 million pounds by 1995. While participation in the reduction program is voluntary, the reporting of releases is not and requirements under the Clean Air Act provide an additional incentive to participate.[6]

2.2 Eco-Audits for industrial facilities

Principles of Environmental Enforcement notes that many countries and international organizations including the International Chamber of Commerce and UNEP advocate using environmental auditing to build the environmental management capability of companies. Auditing has become such a useful tool since it was developed in the U.S. to encourage compliance with new environmental laws that proposals to extend its functions have been made frequently. Sweden proposed an environmental auditing system in 1988 that would have included an annual environmental report on compliance to the government by 6000 facilities. The report would be available to the public. The reports of the 600 largest establishments would be checked by an independent auditor and provide the basis for an inspection program. This proposal was withdrawn but the requirement for annual environmental reports was adopted. About 3500 to 4000 reports are now prepared by Swedish companies.[7] The UNEP report on public communication by companies includes the summary of an annual Environment Report by a Nobel Industries plan, for example. One section lists the maximum levels of some types of chemicals the plant can consume. Other groups have also supported making audit results public in some way. The Valdez Principles developed by CERES after the Exxon oil spell in Alaska call for an annual independent audit to be made available to the public.[8] The NGO conference in Bulgaria called for western firms to carry out comprehensive, annual, and publicly available environmental audits.[9]

While some companies are beginning to issue environmental reports, the predominant view among industry has been that audits are performed to help industry managers to ensure compliance with laws. The results are used internally, not made public. Companies are concerned that if audits must be made public they will no longer be as useful in candidly examining a company's problems and might result in prosecution.

Just how many companies now actually perform audits is unclear. The U.S. EPA sometimes requires companies to perform audits as part of enforcement actions as a means of identifying and correcting management problems that led to a violation. One observer thinks most of the Fortune 500 companies do now audit on a regular basis. Others think that most companies are still in a fire-fighting mode and that only a handful of larger companies in sectors with significant environmental, health, and safety vulnerability such as chemicals are using formal auditing programs.[10] The regulation of CFCs and hazardous waste has also brought some large chemical user companies into the picture.

The EC Commission has proposed a version of auditing that would include public disclosure. The Commission submitted an Eco-Audit regulation to the EC Council in January 1992. Although it started as a mandatory system, the final version provides for voluntary participation by the industrial sector. In the spring, the Commission also issued a second draft of a proposed directive on integrated pollution prevention and control that would apply to major industrial plants. The Commission considered including an inventory, drawing on U.S. experience with the Toxics Release Inventory, in both these proposals. As of mid-summer, it planned instead to issue a third proposal on an inventory. The Eco-Audit regulation and integrated pollution prevention and control draft still include remnants of inventories. The three proposals illustrate the struggle to improve compliance and increase public accountability by establishing environmental management systems at facilities in EC member countries.

What will emerge is unclear at this stage. The integrated pollution prevention and control directive may move forward first and require development of multi-media best available technology standards for major facilities with self-monitoring. As ENDS Report has noted in discussing the auditing proposal:[11] "Few items of EC environmental legislation have begun so ambitiously . . . and few have been whittled back so comprehensively by the time they reached the stage of a formal legislative proposal." Although no longer a mandatory requirement for annual self-assessment requiring outside validation with parallels to a financial audit, the regulation would still, if the Council adopts it, extend the audit beyond an internal check on compliance for a company's managers by requiring a public environmental statement validated by an outside auditor.

The Eco-Audit proposal would require an initial environmental review by the company to make a comprehensive analysis of the site including the choice and management of energy, raw materials and water; the selection of production processes; the life-cycle impacts of products; waste management; accident prevention; training; and public information and participation. This review is similar to the assessment of the potential impact of new large-scale operations which is made public under the EC's 1985 directive on environmental assessment. Eco-Audits would be made at intervals between one and three years. Standards for the audit and auditor accreditation would be set by the International Standards Organisation.

Under the proposed Eco-Audit, environmental statements based on the findings of the environmental review and on the subsequent audits would include a summary of data on pollutant releases; waste generation; material and energy inputs and other significant environmental issues; a presentation of the company's environmental policy and programme for the site; and an evaluation of the performance of the environmental protection system. The statement is to be "kept at the disposal of the public" and submitted to the competent body in the EC member state.

At the moment, it appears likely that company environmental reports will become more common. It is less clear how they will relate to compliance auditing and the increasing use of auditing as a means of identifying opportunities to prevent pollution. Some companies such as Polaroid are issuing environmental reports that document specific changes in chemical use and release. The usefulness of corporate environmental reports in increasing compliance and in improving the environment is likely to be directly related to the extent that they provide data that systematically account for the relationship of a facility to the environment.

2.3 Eco-Labelling for products

Product design is one of the issues to be covered under the Eco-Audit. Similarly, numerous groups are focusing on the need to include products much more systematically in

programs aimed at pollution prevention and control.[12] Improving Material Safety Data Sheets as a means of communicating between manufacturers and product users is one measure. Some countries such as Sweden, Denmark, and the Netherlands are also developing the idea of a product impact declaration or statement. Sweden has a product register that lists the chemical composition of about 60,000 products. France also has a product register. UNEP sponsors a Clean Production Programme. U.S. EPA has begun a Design for Environment Program.

One product information tool already in long-term use is eco-labelling. Germany and Canada, among others, have had extensive experience with eco-labelling programs. Germany's blue angel program is credited with providing the incentive for companies to lower solvent levels in their products. These programs aim to inform consumer choice and introduce a market-based incentive to raising the environmental quality of a class of products.[13] The EC's eco-labelling directive, adopted at the end of 1991, will provide a uniform eco-labelling program for the EC. The program will award an eco-label for environmentally less harmful products in order to encourage manufacturers to design and produce products with reduced impact and consumers to buy them. The directive applies to imported products so will put some pressure on manufacturers elsewhere to compete.

In the U.S. so far eco-labelling is in the hands of private groups such as Green Seal which certifies products designed and manufactured in an environmentally responsible manner. The non-profit group evaluates a product's impacts and develops standards aimed at encouraging environmentally preferable products such as compact fluorescent lamps.[14]

Eco-labelling is one means of informing consumer choices. However, it will cover only certain product groups and is based on a still developing methodology. The effectiveness of labeling programs is frequently questioned. Environmental labeling in its broader sense is also particularly prone to abuse which is one reason to develop labelling standards. In the U.S., a report prepared by attorneys general from ten states highlights the problems with the national green marketing craze of the 1990's and reports on a 1990 Public Forum held jointly with EPA and the Federal Trade Commission. The Forum called for federal standards for environmental marketing claims used in labelling, packaging, and promotion of consumer products. It highlights terms such as "degradable" and "recyclable" as particular problems. The Green Report II makes four recommendations:

- Environmental claims should be as specific as possible, not general, vague, incomplete or overly broad;

- Environmental claims relating to the disposability or potential for recovery of a particular product should clearly disclose the general availability of the advertised option where the product is sold;

- Environmental claims should be substantive;

- Environmental claims should be supported by competent and reliable scientific evidence.[15]

Despite the obstacles to product labelling, broad consumer demand for environmentally-preferable products is an opportunity to use the market to improve the ability to assess the relationship of products to the environment and use purchasing power for environmental purposes.

3 FACTORS THAT INFLUENCE EFFECTIVENESS OF INFORMATION STRATEGIES

Information tools interact with existing regulatory systems and enforcement of their provisions. If there is weak enforcement, the tools can be a place to initiate action. However, they are much more likely to be effective if there is a strong system that, for example, clearly designates liability for mismanagement of waste and includes stringent air and water standards.

Besides the state of the regulatory system, two other factors influence the effectiveness of information tools.

3.1 Designate responsibility for developing and reporting information

The three tools described above go beyond disclosure of information by requiring generation of data that industry, government, and the public need. Uncertainty continues to pervade understanding of environmental problems. Any tool that requires development and distribution of reliable information and encourages improvement in methodology can have a significant effect.

The Toxics Release Inventory provides new information (specific chemical releases from specific facilities) in a useful form. The Chief Executive Officers of most companies reporting these data and their surrounding communities previously had no base estimates about the chemicals being stored and released. Although there was much concern about the likely accuracy of the reports before the inventory was initiated, in fact that has not been a major problem. Instead the data are providing a starting point for improving methods and undertaking broader projects to estimate and monitor releases. When Amoco looked systematically at releases at one of its refineries it found that some of the largest sources such as barge loading had not previously been identified.[16]

Auditing in its proposed EC guise also has the potential to increase the information developed about sources of pollution and habitat destruction and disclose it to the public. An important role in developing auditing standards is being played by the International Standards Organisation. Key questions are the level of specificity of the standards and the diversity of participants in the process of developing them.

The increased attention to labelling is driving the development of life cycle assessment. This tool is just beginning to go beyond a rough calculation of amounts of common pollutants released. In the past, in has not addressed toxic chemicals or looked at environmental impacts. The demand for eco-labelling is making better life cycle assessment methods essential.[17] Ways must also be devised to involve a diverse group in developing assessments and to make their assumptions and results public. Thus the TRI, Eco-Audit, and eco-labelling are driving the development as well as the public availability of more usable information particularly about the sources of pollution and ecological disruption.

3.2 Use information management capabilities and provide for active distribution

Accessibility is the other side of disclosure. How do different publics obtain the information in a form that is usable to them? What infrastructure exists to educate the different publics on the issues and facilitate distribution and use of the information? With product labelling, the information comes with the product but understanding it is likely to be enhanced by education campaigns and public access to the data on which it is based. Whether environmental statements prepared under the proposed Eco-Audit program would actually be distributed and analyzed is unclear. No active distribution and analysis is required by the regulation. Some university programs are analyzing the green plans being developed by governmental units in the United Kingdom.[18] Similar analysis of environmental reports would be important to ensure that they improve company performance.

The TRI demonstrates how accessibility by computer can turn public disclosure into right-to-know. Nevertheless, the TRI would not work by itself. It is effective at bringing change in the U.S. because many companies care about their environmental image, the communications media circulates the information widely, states are using it as the basis for pollution prevention, and citizen and environmental groups are organizing on the basis of the information. For example, a Working Group on the Community-Right-to-Know issues a regular newsletter and tracks implementation of the law. Groups such as the Natural Resources Defense Council have used the data and helped other groups use it to get provisions to regulate toxic releases to air in the 1990 Clean Air Act. These groups are engaged in a "right-to-know-more" campaign to obtain

information on chemical use and production and broader coverage of sources and types of chemicals.

Although it can help raise public awareness, public access to data is more likely to increase compliance with existing laws or push companies to obtain environmental results if the importance of the environment is high on the public's agenda. The types of organizational structures may vary but infrastructure is necessary for any information tool to make a significant difference. This may mean civic or environmental groups analyzing data and pointing out surprising inconsistences among companies. It may mean professional associations donating their scientific and information management skills. It may mean investigative reporters competing for environmental stories in the press or on television. The strength of governmental environmental programs is a crucial factor in this mix that results in requirements to improve, disclose, and use information.

4 WILL SHIFT FROM PUBLIC DISCLOSURE TO PUBLIC ACCOUNTABILITY IMPROVE COMPLIANCE AND ENVIRONMENTAL RESULTS?

These new information tools are strengthening compliance in three related ways: widening participation, framing a broader interrelated approach to environmental policy, and providing information for reduction of pollution and degradation at the source.

First, they are increasing the numbers and types of people participating in pollution prevention and environmental protection. The TRI is not just being used by one EPA office (as most medium-specific databases are) but across the agency and by other agencies of government such as the Bureau of Mines and the Department of Energy. It is being used by investors and community groups and most importantly by the companies themselves. This wide use increases the likelihood that environmental problems will be identified and solved. A Monsanto manager notes this as a particular advantage. Making information public means more people to work on solutions.[19] The TRI, environmental reports, and eco-labels are still early but also significant steps toward developing a public accounting system for environmental impacts useful for people ranging from product designers to community advocates.

Second, these tools, particularly the TRI and the environmental report, begin to frame environmental problems as a whole. Notes a Rohm and Haas manager: "For the first time, engineers have had to scrutinize their processes as a whole and quantify wastes released to all media."[20] Eco-Auditing is similarly aimed at the need to develop integrated, multi-media approach to environmental management in the EC. Current compliance programs in countries such as the U.S. are caught in a fragmented regulatory legal system. These programs draw on a model such as the TRI to help decide how to transform their own databases into more accessible, multi-media tools.

Third, these environmental information tools are particularly important in beginning to provide data about sources as well as about wastes and environmental contamination, the subject of most compliance data. Source data are what is needed to develop new technologies and reduce environmental impact. A monitoring report of parts per billion in water is not as useful to a production engineer as screening data from a product life cycle assessment that compares amounts and types of waste generated at different steps in the manufacturing process. In some cases, especially at the beginning of the reduction process when relatively easy changes in practices can be made, these data can save managers funds rather than costing more.

The relationship between pollution reduction and compliance is a thorny one but two examples demonstrate how it is being worked out in using sector and whole facility approaches. In the Netherlands, governments have been developing a process of Target Group Consultation for most of a decade. Agreeing on covenants to reduce waste and conserve energy with target groups is a major way in which the Netherlands aims to achieve its reduction of about 60 percent of pollutants called for by the National Environmental Policy Plan. The relationship of these covenants to the regulatory system has been a continuing question. As of the spring of 1992 the covenants were expected to have a status in civil law and reductions to be written into permits.[21] Similarly, a whole facility approach in the U.S. state of Massachusetts is working out

the sometimes tense relationship between inspectors and staff providing assistance in pollution prevention. The Department of Environmental Protection trained a team to inspect electroplating facilities along the Blackstone River which is contaminated with metals. The project included 28 inspections and resulted in 19 notices of non-compliance, many of them with recommendations to consult with the state's Office of Technical Assistance. The project not only demonstrated the effectiveness of using single inspectors or a team of two inspectors but re-visits showed that 23 facilities had implemented some type of reduction or prevention measure, much higher than the expected five percent.[22]

New kinds of information, widely distributed, often using rapidly developing computer and communications technology are one important key to the next generation of environmental policy. Many kinds of information--about health and ecological effects and about uses of toxic chemicals in products and processes and releases from them--are needed. Innovative measures for sharing information among companies, government, and the public will need to be developed to handle some types of data. The road from "disclosure" to "accountability" and the "right-to-know" is likely to continue to evolve along a tension-filled but fruitful path as better information about sources and effects and broader participation expand our understanding of how to achieve a sustainable society.

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TABLE 1 EXAMPLES OF ENVIRONMENTAL INFORMATION TOOLS

FACILITIES	WHAT KIND OF INFORMATION IS DEVELOPED?	HOW IS THE INFORMATION MADE ACCESSIBLE TO PUBLIC?
Proposed European Communities Auditing Regulation (1992)	If opt into voluntary system, companies must perform environmental review of facilities followed by audits (every 1 to 3 years); review to include comprehensive analysis of choice and management of energy, raw materials and water, production processes, lifecycle impacts of products; waste management; accident prevention; training; public information and participation.	Environmental statements based on findings of initial environmental review and subsequent audits for the public to include a summary of data on pollutant releases; waste generation; material and energy inputs; company's environmental progress and programme for the site and evaluation of performance of the environmental protection system. Environmental statements to be kept the disposal of the public and submitted to the competent body in the EC member state. Companies that complete audits are awarded a symbol.
FACILITIES\ SUBSTANCES		
U.S. Toxic Release Inventory (TRI) Emergency Planning and Community Right to Know Act (Title III of the Superfund Reauthorization Act of 1986)	Facilities must report routine releases of 320 + toxic chemicals to U.S. Environmental Protection Agency (U.S. EPA) and state environmental agencies if they have more than 10 employees and use an amount of a listed chemical greater than 10,000 lbs or manufacture or process more than 25,000 lbs annually.	Accessible to the public through computerized databases, national annual reports, state agencies, and additional analyses by press, companies, NGOs, and others.
PRODUCTS		
European Communities Eco-labelling Directive (1991)	Symbol will be awarded after a firm provides information to relevant national agencies and the Commission on European Communities on product lifecycle; resources used in manufacturing; and associated pollution and waste data.	Symbol on label indicates that a product has an environmental impact significantly less than that of other products in the same product group.

TABLE 2 ENVIRONMENTAL INFORMATION AND THE PUBLIC: SAMPLE STATEMENTS 1986-1992 BY GOVERNMENT, INDUSTRY, AND NON-GOVERNMENTAL ORGANIZATIONS

GOVERNMENT	SAMPLE STATEMENTS
UNCED Agenda 21, Chapter 19, Environmentally Sound Management of Toxic Chemicals,(Rio de Janeiro, Brazil 1992)	International Organizations are to consider developing guidance on publicly accessible information databases on toxic chemicals for use by interested governments. Corporations are encouraged to provide release data voluntarily for plants in countries where requirements do not exist. The following statements on right-to-know are made: "The broadest possible awareness of chemical risks is a prerequisite for achieving chemical safety. The principle of the right of the community and workers to know these risks should be recognized." Yet, this right to know must be "balanced with industry's right to protect confidential business information."
Organization for Economic Cooperation and Development (OECD) Guiding Principles for Chemical Accident Preparedness and Response [OECD Council Act C(88)85(Final) Annex II] also SECTION D, Environment Monographs NO. 51,(1992)	"The following Guiding Principles are designed to facilitate the implementation by Member countries of programmes and policies to ensure that the potentially affected public is well informed about existing or planned hazardous installations and to facilitate opportunities for the public to provide input, as appropriate, into decision-making by public authorities concerning such installations."
OECD Guidance on Integrated Pollution Prevention and Control Appendix to Council Recommendation C(90)164(Final),(1991)	"The public should be informed and consulted in the evaluation of the health and environmental effects of substances." Technical methods include: "the use of inventories of releases to all environmental media from installations, coupled with inventories of inputs, to enable a 'mass balance' to be drawn up."

U.S. Emergency Planning and Community Right-to-Know Act, U.S. Code 42 Section 11023 h., (1986)	"The release forms required under this section are intended to provide information to the Federal, State and local governments and the public, including citizens of communities surrounding covered facilities. The release form shall be available to inform persons about releases of toxic chemicals to the environment; to assist governmental agencies, researchers, and other persons in the conduct of research and data gathering; to aid in the development of appropriate regulations, guidelines, and standards; and for other similar purposes."
INDUSTRY	
Business Charter for Sustainable Development Principles 15 & 16,(1991)	Principle 15 promotes "Openness to Concerns." Companies should foster dialogue with employees and the public about the potential hazards and impacts of operation, products, wastes, and services - including those concerns of global significance. Principle 16 addresses "Compliance and Reporting," companies should conduct regular audits and periodically provide information to "the Board of Directors, shareholders, employees, authorities, and the public."
U.S. Chemical Manufacturers Association (CMA) Responsible Care Program, Waste Release and Reduction Code, (1990)	"This Code is designed to achieve on-going reductions in the amount of all contaminants and pollutants released to air, water and land from member country facilities. These reductions are intended to respond to public concerns about the existence of such releases..."
European Chemical Industry Federation (CEFIC) Guidelines for the Communication of Environmental Information to the Public,(1987)	"Provide the public with the information necessary to enable them to understand the potential environmental effects of the companies' operations and be prepared to respond to expressions of public concern." The public includes "public authorities, customers, and contractors."

NGOs

Sofia Statement from West goes East Conference: Opportunity or Pollution Transfer?, (Sofia, Bulgaria 1992) 113 public interest participants from 27 countries, including Central and Eastern European nations	NGOs should develop a database on foreign investors, hold annual regional progress conferences, and request accident and release data. Governments should carry out yearly environmental audits which are made public, complete full environmental impact assessments which are developed with public comment, release TRI data, and establish an investment database with environmental information. Firms should provide TRI data to all countries in which they operate, follow responsible care practices, carry out publicly accessible audits and assessments, and provide liability terms and information.
WWF-International Toxics Statement for UNCED,(1992)	Databases on toxics should be publicly accessible and provide information on both uses and releases of chemicals; consistent core data elements should be developed for comparing data across borders; companies should provide TRI data to all countries in which they operate; and technical assistance should be provided to aid countries in establishing right to know programs.
Vienna Principles International Conference on Reporting Releases of Toxic Chemicals, (Vienna, Austria 1991) Principles signed by public interest representatives from European, U.S., and International NGOs.	"The public's right to know is a fundamental attribute to democracy," therefore, information on sources of chemicals, impacts of industrial hazards and pollution should be revealed; industry should operate around the world to the highest standard of environmental protection; transnational companies should release TRI-equivalent data; The U.S. EPA and the Commission of the European Communities should support information gathering legislation; and the TRI should be expanded to cover the full range of industrial operations that affect the environment.

Vesprem Declaration
International Conference
on Prevention of, Emergency Planning for,
and Response to Accidents,
(Vesprem, Hungary 1990)
Statement of public interest
representatives from 9 European
countries and the U.S.

"Every citizen has the right to be notified about and to gather verified information about chemical substances (including radioactive materials); quantities processed; stored and used; specific management of these substances; effects to health and the environment of these substances; accidents involving these substances; routine emissions, and waste production from government-controlled and private industrial activities."

Coalition for Environmentally
Responsible Economies (CERES)
Valdez Principles,(1989)
Developed by environmental
groups and investors
interested in social change

Signatory companies commit to publish an annual report\audit on their environmental performance.

FREE ACCESS TO INFORMATION AND THE LICENSING PROCEDURES FOR INDUSTRIAL PLANTS: THE FLEMISH AND BELGIAN SITUATION

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1 INTRODUCTION

Openness of government and the right to information and involvement of citizens are evidence of the democratic nature of a society. When citizens are given the power to elect their own political representatives, it is essential that these voters are given the opportunity to assess the policies of their delegates.

This primarily implies that government and information should be public and freely accessible.

Various recent national and Flemish legislative initiatives suggest that Belgium, too, will finally see some movement towards meeting the long-standing demand for more openness of government.

Unlike our West European neighbours, Belgium still lacks national legislation which guarantees general openness of government, let alone the fact that the principle of publicity of information is already implemented. The environmentalist movement in Belgium still comes up against the very strictly interpreted duty of secrecy for public servants.

Recently, though, a number of political initiatives were taken towards more openness:

- The national (federal) Minister of the Interior provided for more openness within his own department, as there was no political consensus for a general arrangement on federal level;
- The national Minister of Employment tried to grant unions access to information on environmental matters inside companies;
- The Flemish Minister of the Interior successfully launched a draft decree for a general arrangement regarding publicity of government information.

It is striking, though, how the politicians and their proposed regulations focus chiefly on the access of private individuals to personal files and documents regarding administrative decisions. The publicity of data which concern the whole population, or at least a large section, is traditonally given less importance.

2 PASSIVE PUBLICITY OF ENVIRONMENTAL INFORMATION

2.1 General environmental information

Yet on 7 June 1990 the European Community adopted a Directive which by the end of 1992 will guarantee free access to environmental information and thereby extends the principle of publicity to information "of public interest".

It is no coincidence that precisely with regard to the environment the EEC is implementing a system of passive publicity (access on request). The environment belongs to every one of us and therefore everyone is entitled to know how his environment is being managed and how the state of the environment is developing. Unlike in most of our neighbouring countries, people in Belgium too often have trouble giving legal backing to their demand for access, as they mis (temporarily, we hope) a general legal framework regarding openness of government or specific legal guarantees.

Like in Flanders, the Walloon and Brussels region has implemented the directive whereas nationally the publicity of environmental information is still far off, although the Belgian

government has to implement this directive before the beginning of 1993 for their specific competence in the field of environmental policy.

The Flemish government has adopted the European guidelines regarding publicity of environmental data practically word for word in the VLAREM (see below).

Since the beginning of September 1991, every person can, for a nominal fee, request the Flemish provincial councils for all information regarding the state of our environment and all the various activities which either damage or protect it. Theoretically the provincial council will answer within a month if the information is available and for which price this information can be obtained. A month after the payment of the fee the information should be sent to the applicant. In the meantime it has been proved that this laborious and time-consuming procedure (up to 2 months) does not work and that the innumerable and broadly interpretable exceptions do not impede the practical accessibility of information.

Stimulated by the environmentalist movement, there is a growing demand for comprehensible and legally correct information regarding the state of the environment (active publicity), along with simple access to precise test results and licences (passive publicity).

For this reason, the Flemish environmentalist movement was eager to learn about the first experiences with VLAREM and the publicity of environmental information in Flanders by trying out the legislation with some test-cases. These proved no success. In most of the cases the responsible provincial authority answered much too late and incomplete. Even the minister did not react in time when we did appeal against some of these responses.

This delay is caused by the fact that in most cases the province has to ask herself for the information to other authorities. The formal possibility of direct contact between the public and these authorities would mean an extra gain of time. This does not mean that it remains very useful to organise a central official body for people who do not know where exactly to ask for some information.

2.2 Freedom of environmental information within the company

According to a decree, called Vlarem II, which is very recently adopted by the Flemish government, workers and their representatives have the possibilty to ask for the disclosure of all the information which has to be tranferred by the company they work for, to the Flemish environmental administration. This is very interesting specially because the same decree obliges some companies to organise themselves a system of permanent measurement of emissions.

3 ACTIVE PUBLICITY OF ENVIRONMENTAL INFORMATION.

It is debatable whether the regulations regarding passive publicity that are contained in the VLAREM will affect the policy of active publicity of the Belgian and Flemish governments.

At least in serious emergency situations, the official measurement data should be communicated as soon as possible to the concerned citizens. The objectionable policy with regard to certain "traditional" environmental problems affecting Flanders during summer shows how the practical implementation of the publicity of environmental information should be followed with the necessary suspicion.

In periods of high ozone concentrations, which constitute a reliable criterion for the general level of air pollution, the Belgian people are only informed as soon as the ozone level reaches 200 microgram/m^3 in several places and for several days. Nevertheless, it is known that children get breathing problems when they have been playing for a few hours in ozone levels of 160 microgram. The authoritative medical magazine "The Lancet" recently reported how asthma patients react more heavily to allergens when exposed to an ozone level of 120 microgram.

The Belgian government should warn asthma patients and their doctors whenever pollution becomes so serious that they might suffer. Whenever there is so much pollution that children should not play outside (for too long), the people ought to know.

There is no point at all in waiting for several days until the pollution has become general before warning the population.

About the salmonella poisoning of the coastal water, too, the Secretary of State for the Environment releases no up-to-date information either, not even if the legal quality standards are exceeded. Independent tests by our organisation and the testing programme of the National Institute for Hygiene and Epidemiology have shown that this summer the water at some of the Belgian beaches did not satisfy the legal standards. Nevertheless, these results, such as the level of salmonella bacteria in the water, are obscured by an overall quality assessment of which the criteria are not at all clear and which does not take account of the standards laid down in the European bathing water directive. Moreover, bathing water which does not satisfy the legal regulations is even officially rated as "good" or "very good".

Since the results of the tests, which should indicate the non- compliance with the standards, are not given wide publicity, the spirit of the Directive regarding the free access to environmental information is not observed either.

To avoid misplaced fear of "unexpert and alarmist" interpretations, the population is often only given a few brief quality assessments or is informed belatedly of the fact that danger levels have been exceeded. Individuals must have the opportunity to compare the available data on the quality of the environment with more precise personal health requirements. Democratic control of the compliance with environmental quality standards is only possible if the relevant up-to-date measuring data are available.

The publication of evaluation reports long after the event does not alter the fact that the population should be informed quickly and completely. As a matter of fact,only in Wallonia does there exist a legal obligation to publish an annual report called "Etat de l'environnement wallon".

In their policy of openness, the authorities should regard the population as an equal interlocutor with the right of involvement and of access to all currently available objective information concerning the state of the environment and of nature.

The aforementioned examples show that in actual practice all legal regulations concerning the passive publicity of environmental information threaten to become pointless without a general change in mentality towards more openness of government. Perhaps the European Community might have to give the Belgian government a little push in the direction of general openness of government. A general European framework for active publicity of environmental information would be even better.

4 OPENNESS AND PARTICIPATION DURING LICENSING PROCEDURES

4.1 Former problems

Under the present division of competence between the national Belgian government and the 3 regions (Flanders, Wallonia and Brussels), the regions have practically full authority with respect to environmental matters since 1980.

On the one hand there are the national regulations which remain in force until such time as they have been replaced by new regional legislation. On the other hand, each region has separate laws and procedures for various environmental matters concerning industrial establishments. So, since 1980 this regional legislation has gradually eroded the old national legislation. That is why in Belgium a highly complex body of laws and divergent licensing procedures has evolved, some of which are very deficient with respect to publicity and involvement.

The national law of 26.03.1971 regarding the protection of the surface water, for instance, has put in place an entirely closed licensing procedure for effluent water, without public investigation and without the opportunity of access to licence applications and issued licences.

The Flemish decree of 02.07.1981 regarding waste management does not provide for public investigation when issuing waste disposal licences. It is possible, though, to lodge an administrative appeal.

On the other hand, operating licences that are issued on the basis of a national set of regulations dating from 1946, which only regulate air and noise pollution, are issued after the public had the formal possibility to make remarks or to appeal.

The Flemish region has used its new powers to make some significant improvements to the licensing procedures for nuisance industries.

Beginning of September 1991, a new environmental licence legislation became effective in Flanders (Vlaams reglement inzake milieuvergunningen - VLAREM (Flemish Legislation governing Environmental Licences).

The new global "environmental licences" incorporate all previous sectorial licences (operation, discharge of industrial water, waste treatment, storage and disposal of toxic waste). Even the building licence cannot be implemented as long as the environmental licence has not been issued.

Until lately, separate licences had to be requested for all these different aspects, such according to separate procedures with very different modalities.
This situation continues to exist in Brussels and in Wallonia where such uniformity and improvements regarding publicity and public involvement have not yet been achieved.

4.2 Licensing procedure for a nuisance industry according to VLAREM

The licence application is deposited for public at the town hall for a period of 30 days. If necessary, this application is supplemented with an environmental impact assessment or safety report. The environmental impact assessments are drawn up according to the guidelines contained in Directive 85/337/EC which were adopted in a number of provisional implementing orders only as recently as 23 March 1989. For the safety reports, the VLAREM provides for a procedure which is almost identical to that for the environmental impact reports.

Our experience with environmental impact assessment is therefore quite new. However, certain problems are already manifesting themselves. Particularly the limited and belated involvement of the public in the assessment procedure gives rise to misunderstandings and frustration. No public involvement is provided for while the report is being drawn up; third persons only get to see the report when it has been completed. Only during the short term of the public investigation of the global application (30 days) can the report be perused and formally some outdated suggestions or criticism be given.

The applications for the most polluting industrial plants (category I) are published in 2 newspapers or weeklies. Owners and users of a building within a radius of 100 metres around the perimeters of the sites of the establishments concerned are informed in writing of these applications.

Appeals against the planned establishments can be lodged with the council within the term of the public investigation.

The licence is also posted up for 30 days and open for public at the town hall. During these 30 days, a non-suspensive appeal may be lodged with the authorities. After these first thirty days, the old licences may be consulted at the town hall for at least two days a week. The secret nature of Belgian licences for the disposal of effluent water thus removed; the same applies for these licences which were issued before the new legislation came into effect.

The environmental licence itself remains public, but the other elements contained in the licence application such as opinions and reports (including environmental impact assessments and safety reports) theoratically disappear for good into the archives after the procedure.

The VLAREM has undoubtedly introduced some major improvements to the licensing procedures for nuisance industries. Our first experiences with the new regulations are therefore rather good. Nevertheless a democratic process in the environmental impact and safety assessment are an absolute precondition in order not to create definitive distrust with the Flemish people towards these undoubtedly very useful policy instruments. Here, too, the European Community can play an important role by adjusting the European directive on environmental impact assessment.

A separate European directive containing minimum guidelines for publicity of applications and licences; opportunities for public involvement and duty of justification and information could certainly be useful to the development of more democratic licensing procedures for industrial plants in European countries and regions where, (like for example in Belgium: Brussels and Wallonia) there is still much scope for improvement in this area.

USE OF PUBLIC DISCLOSURE IN ENVIRONMENTAL PROTECTION PROGRAMS TO ENHANCE COMPLIANCE AND CHANGE BEHAVIOR IN THE UNITED STATES

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SUMMARY

Public disclosure of environmental information is a cornerstone of the regulatory process of the United States. Virtually every piece of national legislation requires self monitoring, and the full and open reporting of environmental data by the regulated community. It is increasingly clear that the public disclosure of this data is playing an important role in achieving compliance and in fostering improved environmental management.

There are several points that are highlighted in this paper: (1) the public has clear and specific access to virtually all of the self-monitoring data submitted at the state and national level, (2) public access to data like that filed under the Toxics Release Inventory program has led to dramatic reductions in emissions and a growing participation in voluntary reduction programs, (3) public notice can be an important enforcement tool in statutes like the Safe Drinking Water Act and the Clean Water Act, (4) using press releases and publicity about violations and enforcement actions serves as a deterrent and can lead to improved compliance rates, (5) data integrity is of great significance, (6) public notification can help stimulate pollution prevention efforts on the part of the business industry.

1 PUBLIC ACCESS TO COMPLIANCE MONITORING DATA

In the United States, data furnished by the regulated community is relied upon not only to determine compliance status, i.e. is the source in or out of compliance with applicable regulations, but also to analyze compliance patterns, target compliance inspections and focus enforcement actions at the state and national level. Self-monitoring in some instances is required through legislative action or in some cases, self-monitoring is required under rulemaking authority of the state or national agency. Since there are hundreds of thousands of sources to be regulated in the United States, self-monitoring and the reporting of that data to the responsible agency is the underpinning of this nation's environmental control program. It simply is not possible to have inspectors check each and every facility.

Virtually all of the self-reported information in the United States is available to the media and the public, and the regulated community submitting data is well aware of this. The mere fact that this data can be subjected to public scrutiny in and of itself can act as a powerful motivator. It helps make sure that business and industry files all of the required information and in a growing number of instances acts as an incentive for industry to go beyond mere compliance with the applicable law or regulation.

Regulatory agencies at the Federal and State level undertake proactive programs in order to make sure that the public has access to the data filed by the regulated community.

Under the Clean Water Act, for example, sources holding an EPA permit to discharge into waterways must implement as a permit condition sampling and testing programs. These discharge monitoring reports give detailed data including facts on whether or not the source is in compliance with all of its requirements and, if not, how the source intends to correct the problem. Quarterly non-compliance reports are routinely prepared and sent to individuals and groups on a

mailing list. Individuals wishing to receive this data can simply write to EPA and be added to the list.

EPA often is required to file annual reports to the U.S. Congress on certain pieces of data that it collects under the various statutes. The agency routinely releases these reports to the public as well.

In many Regions of EPA press releases are issued, briefings are held and reports released on data submitted by various companies. The key objective is to make sure that the data obtained by a public agency actually reaches the public. Often, however, the data released as part of a proactive effort is cumulative in nature - it gives a general picture of the data from a Regional or national viewpoint - it is not industry specific.

Many representatives of the public want more specific information that pertains to an individual company or companies in a carefully defined geographic area. In the U.S., thousands of requests for data of this kind are released to the public under the Freedom of Information Act or a comparable state statute. These laws were established to ensure that the public has total access to regulatory agencies' files.

At the national level, the Freedom of Information Act was passed in 1978 and it is clear from its history that it was intended as a disclosure law, not a withholding law. In our Region as well as in all of the other parts of EPA, there is a presumption in favor of releasing information.

Only a few exemptions are allowed. First, a business or industry can request that certain pieces of data be withheld because it contains trade secrets that would hurt them and/or one or more of their competitors. Such a request is not automatically guaranteed. EPA must rule on a case by case basis that it contains confidential information that should not be released. If such an exemption is granted, the confidential business information must be handled very differently than other data filed by the regulatory community.

In a Region like ours, only a handful of people who have certain security clearances and who have passed a required annual test have access to such information. This group also must sign documents pledging that they will not divulge this confidential information and the penalties for violating that pledge are very serious. This high level of security is necessary in order to make sure that this confidential data is not inadvertently released.

Second, draft documents and working papers are also exempt from public access as are sensitive enforcement information, individual personnel records, matters of national defense or foreign policy, internal agency rules and information exempted under any other statute.

Handling the requests that come in under this act can be extremely resource intensive. In our Region, for example, some 1900 requests for various pieces of data were received in 1991.

When the request comes in it must be logged in, assigned a number and input into the computer for tracking purposes. This is critical since under the law, the agency has 10 working days to respond to the request. The request then has to be reviewed by the person in charge of that information as well as by an attorney. In most instances it is determined that the information can be immediately released. In our Region, in about 15 percent of the cases, it is determined that portions, or all of the request must be denied because the information is exempted under the law. EPA must notify the requestor of that denial and state specifically why that data can not be released. The requestor does have appeal rights and in some instances the information ends up being released.

Once a positive determination is made, the information must be copied and sent back to the requestor. Often the files are voluminous and it takes a good deal of effort to complete that copying process. Under the law, EPA can charge a requestor a specified amount for that task. The Agency must notify the requestor of the estimated cost before the copying gets underway. In many instances the Agency is asked to waive those costs since release of the data would clearly be "in the public interest". Those waivers are granted for the most part except in cases where the requestor is gaining the information for a profit making venture (such as requests from environmental consulting firms that are trying to get information to augment its business contacts).

2 PUBLIC DISCLOSURE OF ENVIRONMENTAL RELEASES

One telling example of a disclosure law in the United States yielding unexpected benefits, is the Toxics Release Inventory (TRI) program under the Emergency Planning and Community Right to Know Act of 1986 (EPCRA). This law requires manufacturers who discharge/use more than 10,000 pounds of any of 300 chemicals or chemical categories, to record and report to the U.S. Environmental Protection Agency on any releases and off-site transfers. TRI is essentially a reporting and public disclosure instrument.

Since 1987, EPA has issued an annual public report on the data contained in the Toxics Release Inventory submitted by more than 22,000 facilities all across the United States.

When the first report was issued, U.S. regulators, reporting corporate officials and the general public at large were stunned at the high volume of toxics being released into the environment or being transferred off site. This was the first comprehensive report of its kind and it showed that more than 7 billion pounds of toxics were being released or transferred off site by U.S. facilities. The public was in an uproar and the release of this data had a profound impact on the regulated community.

It should be noted that, under TRI, a company is not required to reduce their emissions, but because of the negative publicity resulting from full disclosure of the TRI data, many U.S. corporations have embarked on aggressive programs to minimize waste, to use smaller amounts of toxic materials, and to substitute less toxic constituents in their processes.

Even where the use and release of toxic chemicals is legally permissible per agency standards and legal requirements, public disclosure of the amounts of these releases by EPA has prompted major action by sources to reduce such use and releases. No facility wants to be identified as a major emitter or user of chemicals even when their actions are completely legal.

The public release of the TRI data is accomplishing its intended goal. Each year there has been an overall decrease in total releases and transfers. For example, there has been an 11 percent decrease in TRI releases and transfers in the last two years.

This simple act of reporting and the public disclosure of self-generated data has had a persuasive and dramatic effect at U.S. facilities that use and release chemicals.

As a direct result of the release of the TRI data, national legislation was enacted in 1990 (the Pollution Prevention Act) that expanded EPA's role in encouraging industrial source reduction and recycling in all of its regulatory and non-regulatory programs by requiring sources to report on what efforts they have underway to reduce, recycle, reuse or treat each chemical reported on a TRI form.

The publication of this data has also produced an avalanche of legislation at the state level requiring more specific information reporting from companies. Approximately 16 states, through legislation, now variously require sources to report to regulating agencies on how they plan to reduce their emissions, reduce their use of toxics materials, reduce waste streams and prevent pollution.

The TRI data base is completely computerized and the public has full access to that information. EPA, in many Regional Offices, has undertaken training problems on how to access the data. In the New England Region, for example, training courses for environmental newspaper, radio and television reporters were held. That Region has also trained environmental group leaders and staff members of elected officials. This type of training is critical to ensure wide public dissemination of the material contained in TRI.

3 PUBLIC NOTICE AS AN ENFORCEMENT TOOL

In many instances the release of self generated data can be very useful in returning a violator to compliance or in actually generating a formal enforcement action.

As noted earlier, under the Clean Water Act, summaries of the discharge monitoring reports filed by business and industry are routinely circulated. Citizen groups also review EPA files to determine if any violators of the Clean Water Act have been reported by those holding permits.

As a result, over the years, groups have brought a number of suits against companies for violation of these permits. Approximately 100 cases a year have been brought under the Clean Water Act citizen suit provisions. In 1991, nearly $5 million in penalties were imposed as a result of these citizen suits. The previous year was also a record where nearly $3 million was collected. It is clear then that under the Clean Water Act, a company's own data is being used to generate enforcement action. This certainly acts as an incentive for companies to stay in compliance.

It should be noted that in many instances these citizen suits have been filed because the government at the Federal or state level has been unwilling or unable to take enforcement action. In some instances these suits have helped the government improve its compliance roles.

Another form of public disclosure can be found in the Safe Drinking Water Act. Under this law, water suppliers must routinely sample drinking water, typically once a month, obtain independent laboratory certification of contaminant levels, keep records and report compliance status on a monthly basis to the regulatory agency. Depending on the seriousness of the violations, sources must make a full disclosure to the appropriate regulatory agency within forty-eight hours.

In addition, if monitoring reveals serious non-compliance, water supply customers must be notified by radio/television broadcast, newspapers and/or by direct mail within specified time frames. Naturally, such disclosure of problems with a water supply can lead to a lot of pressure on the supplier to immediately correct the deficiency. The consumers will demand quick response. Once such contamination is reported, subsequent remediation or corrective action must also be publicly noticed and reported regularly to the agency until water quality is restored.

Water suppliers take extra steps to ensure a safe water supply knowing full well that there will be full public disclosure of any problems.

4 THE POWER OF THE PRESS

As noted earlier, the press has access to much of the self-generated environmental data required of the regulated community. This can act as an incentive for sources to provide data required by the government in a complete accurate and timely fashion. Non reporting in and of itself can be damaging to a company's public image and can lead to civil or criminal liability.

In the U.S., as in many other countries, the fear of adverse publicity acts as a strong deterrent to non-compliance with environmental requirements. Having a positive image in a society of environmentally concerned citizens/consumers is important to regulated sources. In the U.S., companies want to be known as "green" companies they do not want to be labelled "polluters." Because public disclosure of non-compliance is damaging, this mechanism is used deliberately as a tool by lawmakers, courts, agencies and environmental groups to obtain compliance.

In the U.S., State and Federal environmental agencies commonly issue press releases about non-compliance by individual sources. Agency records of non-compliance, even when based on source-furnished data, are available to the public and often are publicly disclosed.

In the U.S., EPA's national and regional offices routinely issue press releases and news stories about enforcement actions and penalties assessed against non-complying sources. The same is true of state environmental agencies.

EPA annually issues an Enforcement Accomplishment Report which includes individual case summaries. This is widely disseminated to citizens throughout the country. The agency also reports on its efforts to Congress and this data is also available to the public.

Members of the press and environmental groups commonly review compliance information in agency files that has been supplied by sources. This too can lead to press related stories and even citizen law suits against non-complying sources.

Corporations in the U.S. fear bad publicity. It is bad for their image. It can hurt their sales and a damaged reputation can sometimes put a company out of business. The fear of a negative image is very real, and therefore, many companies knowing that there will be public disclosure of data they are providing, go out of their way to ensure compliance.

Business and industry also utilize the press. When monitoring and data show improvements or significant reductions in pollution levels, U.S. industry routinely contacts the media to get that message out. Industry has come to recognize that being more open and releasing information on a timely fashion can be to their advantage.

In our Region, we have found that the press can be a major ally in helping to improve compliance. Often after publicizing an enforcement case, we will hear from other companies who may be having a problem and want to talk to us about how they can resolve their non-compliance. Companies have often asked us to withhold the issuance of a press release or have asked us if they can review such a release before it is sent out to the press. In our Region, we issue a release on every enforcement action. Whether to issue a release or not is non-negotiable. We do not allow a company to review a press release before it is issued, however, if a facility is cooperating with us and moving quickly to correct the problem, we will give them credit for that activity in our release. We also have received "tips" about similar compliance problems from people who read or hear about an enforcement action in the press. We send inspectors out to follow-up on these complaints. We are the only Region (among the 10 EPA Regions) that issues a release on every action. We certainly feel that making this information available to the media - and therefore the public - helps make business and industry want to comply with the law. The press can be a powerful ally.

5 INTEGRITY OF DATA IS KEY

In order to have full and complete disclosure, EPA as well as state agencies undertake a number of programs to ensure data integrity.

First and foremost, it is important to make sure that all sources that are required to file self-monitoring data, do exactly that. The agency does take action against those who fail to file the required information and there are stiff monetary penalties for those who refuse to cooperate. For example, under the TRI program, more than $16 million in penalties for not filing timely reports has been assessed. Tracking is done under the Clean Water Act to make sure that the required discharged monitoring reports are filed. When a report is not filed on a timely basis penalties can be assessed.

Making sure that the data is complete and accurate is also important. EPA relies heavily on data generated by the regulated community. The Agency takes a number of steps to make sure that what is being filed is accurate information. Surprise audits of a company's discharge are undertaken for example.

The penalties for filing false or inaccurate data are very severe and can even result in criminal actions. In our Region we have initiated criminal actions against several companies we believed filed false data in order to avoid a showing of non-compliance. The Agency has shown its willingness to use every enforcement tool at its disposal to guarantee the integrity of its data.

6 PUBLIC DISCLOSURE HAS LED TO MAJOR POLLUTION PREVENTION EFFORTS

Having a good environmental record is of primary importance to many U.S. businesses and industry. The regulated community also has come to recognize that a heavy emphasis on enforcement at the State and Federal level has made it very costly to go out of compliance.

Businesses are well aware that the data they submit to regulators will be open to public scrutiny. As a result, many corporations, particularly major ones, have begun to implement ambitious pollution prevention programs. Instead of cleaning up pollution at the end of the pipeline, businesses have begun to implement programs to prevent pollution from occurring in the first place. They therefore, in their report to the regulating agencies, will show progress. Many businesses and industries in order to get full credit for their efforts, issue press releases or progress reports on their efforts. It is the regulated community itself that utilizes public disclosure when there is a good story to tell. Many U.S. corporations have recognized the importance of disclosing environmental success stories and this has led to more awareness that it is necessary to implement pollution prevention programs.

7 CONCLUSION

Full and open public disclosure of virtually all data supplied to the government by the regulated community is a somewhat unique feature of the U.S. regulatory process. While some in the regulated community may not like it, the fact is that disclosure has brought many benefits to environmental management in the U.S. The public has come to expect full and open disclosure as part of the regulatory process.

OUTLINE OF PROCEEDINGS VOLUME II

The second volume of the Proceedings will contain the following subjects:

PREFACE

OPENING SPEECHES

The full text of the speeches at the openening of the Conference will be made available.

ADDITIONAL PAPERS

Papers that were not available in time or were submitted during the Conference will be included in this part of the Proceedings.

SUMMARIES OF THE THEME DISCUSSION SESSIONS

The moderators together with designated secretaries will provide a summary of the discussions during the theme sessions. These summaries will reflect thoughts, ideas and experiences exchanged as provided during the formal discussions.

CLOSING REMARKS

The full text of the closing remarks as presented by the Conference co-chairs will be made available.

CONFERENCE EVALUATION

The results of the evaluation, as deducted from the received evaluation forms, will be included.

LIST OF PARTICIPANTS

A list of participants actually attending the Conference will be included.

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An Executive Planning Committee whose membership is listed in these Proceedings, was created to provide leadership and direction in the design of the program, selection of the speakers and panelists, and identification of individuals from a range of nations who would be in the best positions to share practical experience in environmental enforcement and to improve or develop domestic programs. In keeping with its focus on Central and Eastern Europe, the Executive Planning Committee included the representatives of the Environment Ministries of Poland, Hungary, and the Czech and Slovak Federal Republic as well as Hungary's Public Prosecutor and the Regional Environmental Center in Budapest. The United Nations Environment Programme (IE-PAC) was also a key member of the Executive Planning Committee, in an effort to further expand the exchanges that began with the first International Enforcement Workshop, sponsored by the Netherlands Ministry of VROM and U.S. EPA, in May 1990 in Utrecht, the Netherlands.

Members and staff of the Executive Planning Committee, listed within these Proceedings, spent many hours discussing and reviewing staff proposals for the Conference structure and content and in identifying experts from government at all levels, NGO's and industry that would ultimately determine the success of the Conference.

Given the Conference location in Budapest, we wish to particularly acknowledge the hospitality and special efforts of Dr. Károly Misley and Dr. Nándor Zoltai to make this exchange not only productive but enjoyable.

Primary staff and coordinators of the Conference were Mr. Jo Gerardu of VROM and Ms. Cheryl Wasserman of USEPA who were responsible for drafting the Conference program and materials. The Conference logistics, preparation of the Proceedings, and handling of Conference communications was directed by Mr. Jeroen Bartels from Environmental Resources Limited Nederland.