

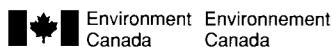
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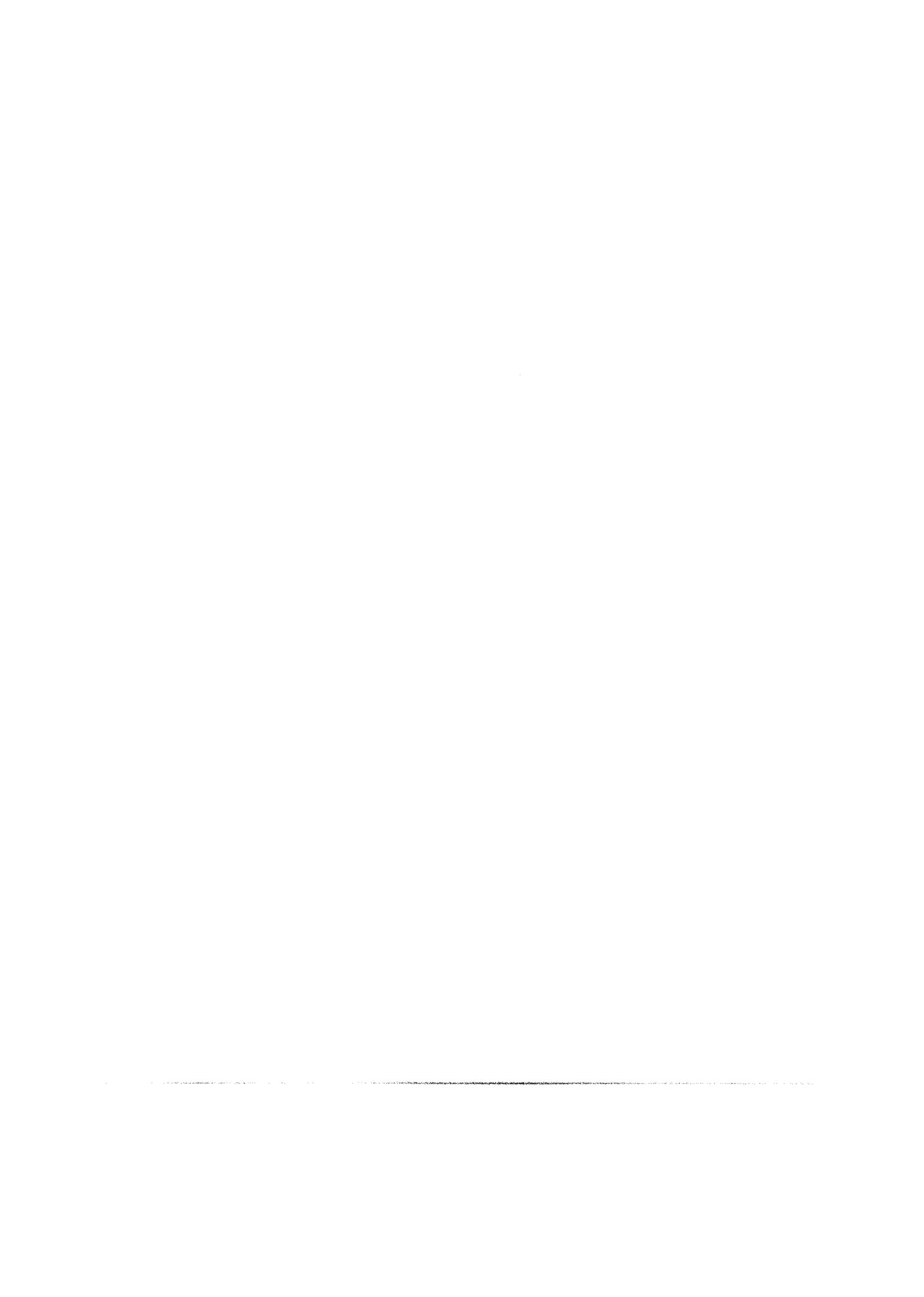
PROCEEDINGS

VOLUME 1

# FOURTH INTERNATIONAL CONFERENCE ON ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT

April 22-26, 1996  
Chiang Mai, Thailand





# **FOURTH INTERNATIONAL CONFERENCE ON ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT**

## **CONFERENCE PROCEEDINGS VOLUME 1**

**April 22-26, 1996  
Chiang Mai, Thailand**

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These Proceedings, Volumes 1 & 2, include papers prepared by speakers, conference participants, and other interested parties, remarks of the opening speakers, summaries of workshop discussions, selected exhibit materials, and the Conference evaluation from the Fourth International Conference on Environmental Compliance and Enforcement, April 22-26, 1996, in Chiang Mai, Thailand.

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Opinions expressed are those of the authors, and do not necessarily represent the views of their organizations.

## **DEDICATION TO THE VICTIMS OF CHERNOBYL**

These Proceedings are dedicated to the Victims of the Chernobyl disaster, a global environmental catastrophe. Participants were reminded of the 10th anniversary of the disaster in the closing moments of the Fourth International Conference by Ms. Svitlana Kravchenko who read a statement and requested a moment of silence in memory of the victims of Chernobyl who are still bearing its consequences.

Two million eight hundred thousand people, including more than half million children under the age of 14, are now living in areas contaminated by the Chernobyl catastrophe despite the fact that approximately 200,000 people and more than 2000 settlements were moved from the contaminated zone. 150,000 people, including children, received radiation poisoning to the thyroid, which exceeded permissible limits. Today the Ukrainian list of Chernobyl's victims consists of 405,576 persons, in addition to 36,000 persons who are on the military-medical list of the Ministry of Internal Affairs and Security Service of Ukraine. Diseases of the respiratory and digestive systems, as well as the endocrine and blood circulation systems, account for a significant percentage of the mortality rate of children living in contaminated zones. Experts now consider that the Chernobyl disaster has created a new epidemic called Chernobyl AICD. All children of the Chernobyl zone have reduced immune systems.



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**FOURTH INTERNATIONAL CONFERENCE ON  
ENVIRONMENTAL COMPLIANCE AND  
ENFORCEMENT**

**VOLUME 1**



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## PREFACE

These Conference Proceedings contain papers solicited from the speakers, participants and other interested parties for the Fourth International Conference on Environmental Compliance and Enforcement held April 22-26, 1996 in Chiang Mai, Thailand. Additional papers that were not available at the conference are also included in Volume 1 or 2 of these Proceedings. The Proceedings will be widely disseminated to all conference participants, other country environmental officials and NGOs throughout the world, and also will be accessible through the internet's world wide web.

The Fourth International Conference is part of an ongoing international collaboration to develop domestic environmental enforcement programs in different settings that can effectively achieve widespread compliance with each nation's environmental requirements. The Conference also sought to strengthen the ability of each nation to carry out domestic programs related to international environmental agreements. The Fourth Conference builds on the first International Enforcement Workshop held in Utrecht, The Netherlands, in May 1990, the second International Conference on Environmental Enforcement held in Budapest, Hungary, in September 1992 and, the Third International Conference on Environmental Enforcement held in Oaxaca, México, in April 1994.

The Fourth International Conference sought to catalyze efforts to build institutional capacity for environmental compliance and enforcement to both enhance existing and develop new environmental enforcement programs - a challenge for all nations. The Conference built on the frameworks and resource materials developed at the previous conferences and continued to introduce new materials that offer more hands-on information comparing and contrasting different approaches to important compliance program elements. The Conference program stressed the driving forces behind compliance and enforcement program development: sustainable development, international trade and economics, and increasing public pressure and involvement in decision-making concerning activities with significant environmental impacts. It highlighted and offered stepped-up support for capacity building by fostering regional and international networking, cooperation, and dialogue on common problems. The Conference program continued the successful format of the Oaxaca Conference, emphasizing hands-on workshops that offer practical applications in the fundamental principles of environmental compliance and enforcement and in designing enforcement and compliance programs. Fourteen new and ongoing special topic workshops were structured around issues addressed in papers solicited from experts in the field. Results of the small workshop discussions are summarized to capture current thinking and experience on the subject. Special exhibits further promoted the exchange on these topics.

The Executive Planning Committee for the Conference devoted much time and effort to design a Conference to offer the greatest opportunity for useful exchange and practical information for individuals both within and outside government who can influence the successful design and implementation of enforcement programs. Additional information about the Conference and resource materials can be obtained by contacting the Staff or members of the Executive Planning Committee. On behalf of the Executive Planning Committee, we look forward to your continued and productive use of these Conference materials.

### Editors:

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## CONFERENCE PURPOSE AND GOALS

The Fourth International Conference on Environmental Compliance and Enforcement was held in Chiang Mai, Thailand, April 22-26, 1996. The Conference built on the work of the first three International Conferences. Each Conference has, in turn expanded its sponsorship, participation, and scope to reach an ever-broadening audience and to develop more extensive and useful materials and frameworks for exchange.

### **Promote the Importance of and Underscore the Driving Forces Behind Effective Environmental Compliance and Enforcement**

These Conferences respond to the urgency of addressing environmental concerns both domestically and on a global scale and to the increasing recognition by government and nongovernment officials of the critical role that environmental compliance and enforcement plays in ensuring an effective response. Growing interest in environmental compliance and enforcement stems from a desire to ensure that environmental requirements lead to real improvements in environmental quality. Environmental enforcement - broadly defined as the range of actions governments and others may take to encourage and compel compliance with environmental requirements - is critical to achieving environmental objectives.

Effective domestic environmental compliance and enforcement programs are an important factor in global efforts to reduce international trade barriers and enhance economic development in a manner that does not create unfair competition or pressure to diminish environmental quality and stewardship of valuable natural resources. Effective enforcement also can 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 that might undermine longer-term economic and environmental goals for a sustainable future.

### **Foster Institutional Capacity to Enhance Existing and Develop New Environmental Compliance and Enforcement Programs**

The Fourth International Conference on Environmental Compliance and Enforcement focused on building the institutional capacity for enhancing existing and developing new domestic environmental compliance and enforcement programs. The United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in June 1992, produced an international agenda, Agenda 21, which firmly states that effective environmental compliance and enforcement programs are a key element of environmental management and which recognizes the need to build institutional capacity for effective enforcement in each nation's environmental program. The Fourth International Conference on Environmental Compliance and Enforcement was designed to help all nations achieve the objectives of this international agenda.

The Conference program provided the potential and opportunity for nations to establish consensus around priorities for capacity building within and across regions of the world and facilitate access to international support. It also included topics and workshops to meet the needs of those just beginning to develop programs and those with existing programs seeking to improve them.

### **Serve All Stakeholders Influencing the Design of Environmental Compliance and Enforcement Programs**

The target audience for the Conferences is enforcement officials and policy-makers both within and outside government who are in a position to influence the design or enhancement of environmental compliance and enforcement programs. Within government the Conference sought representation from national, regional, and local governmental units responsible for both the legal

and technical aspects of environmental compliance and enforcement at the mid- to senior-management levels. It also involved selected nongovernmental organizations (NGOs) and industry representatives.

### **Encourage Ongoing International Exchange and Regional Networking**

The Conference program encourages follow-up beyond the Conference itself in several ways. The program highlighted international as well as regional resources and networking designed to help nations address common challenges and priorities and offer potential models for nations within all regions to support each other in these efforts. The program sought to establish consensus around an international agenda for capacity building that will help to guide limited resources to greatest advantage. The program included opportunities for nations within different regions of the globe to explore how they can build on existing collaborative international arrangements to provide accelerated progress and cooperation in environmental compliance and enforcement. Conference participants were drawn from all regions, with a special emphasis on Asia and the Pacific to take advantage of the Conference's location and the opportunities it presents to promote greater international exchange and regional networking among countries in Asia and the Pacific.

### **Foster Exchange of Expertise and Learning Through Active Participation**

The Conferences are structured to provide ample opportunity for participants to form professional networks and to learn through active participation. In addition to open discussion during plenary sessions and workshops of fewer than 25 participants on the second, third, and fourth days, there were regional meetings and informal opportunities for exchange around exhibits and related Conference events.

**CONFERENCE PROGRAM**

**APRIL 21, 1996** Welcome Reception and Registration

15:00-18:00 Registration

17:00-18:00 Reception

**DAY ONE  
APRIL 22, 1996** **PLENARY SESSION**

08:00-08:30 Registration— Late Arrivals

08:00-18:00 **Exhibits** (throughout the Conference)

- Video Displays on Training, Compliance Promotion
- Inspection, Inspector Training, Compliance Monitoring Equipment Exhibits
- Computer Applications and Internet Displays
- International Program/Regional/Country Information

08:30-09:30 **Welcome and Opening Remarks**

Day Chair: Mr. Steven Herman, Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S. EPA

Co-Chair: Mr. Pieter Verkerk, Inspector General, VROM, The Netherlands

Opening Speeches

Mr. Steven Herman, Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S. EPA

- Importance of International Exchange

Governor Virachai Naewboonien, Chiang Mai Province, Thailand with Mr. Jakapan Wongburanawatt, Dean of Social Science Faculty, Chiang Mai University

- Chiang Mai's Environmental Challenges

Minister Yingpan Manasikarn, Ministry of Science, Technology and the Environment

- Evolution of Environmental Compliance and Enforcement Programs in Thailand and Current Challenges

Minister Margarethe de Boer, Ministry of Housing, Spatial Planning and the Environment (VROM), The Netherlands, delivered by Mr. Pieter Verkerk, Inspector General

- Reaching Out to Others for Effective Environmental Enforcement

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- Theme #1: Driving Forces Behind Environmental Compliance and Enforcement Programs**
- 09:30-10:00 **Keynote Address**
- Speaker#1: Mr. Reuben Olembo, Deputy Executive Director, United Nations Environment Program (UNEP)
- Driving Forces for Environmental Compliance and Enforcement: Sustainable Development, International Trade, Public Pressure and Involvement in Decision-Making and the Implications for Cleaner Production, Environmental Law, and Sustainable Development
- 10:00-10:30 Break/Press Conference
- Theme #2: Principles of Environmental Compliance and Enforcement**
- 10:30-11:10 Speaker #2: Ms. Cheryl Wasserman, Associate Director for Policy Analysis, Office of Enforcement and Compliance Assurance, U.S. EPA
- Defining Compliance and Enforcement
  - General Framework for Compliance and Enforcement
- The Impact of Driving Forces on Environmental Compliance and Enforcement Programs**
- 11:10-12:30 Moderator: Ms. Cheryl Wasserman
- Panel Discussion:
- Industry Representative: Dr. Dorothy Bowers, U.S. Technical Advisory Group to ISO14000
  - Philippines: Ms. Rachel Vasquez, Assistant Director, Environmental Management Bureau
  - Mexico: Mr. Javier Cabrera Bravo, General Director for International Affairs, PROFEPA
  - Poland: Mr. Stanislaw Wajda, Legal Advisor, EC Phare Program, Ministry of Environmental Protection
- 12:30-14:00 Lunch

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- Theme #3: Establishing International Cooperation and Regional Networks: Status of Efforts Under Way**
- 14:00-15:30 Moderator: Mr. Marius Enthoven, Director General Environment, European Commission
- Panel Discussion:
- INTERPOL: Mr. Jan van Doorn, Chief, Environmental Crime Unit, INTERPOL
  - Americas: Mr. Steven Herman, Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S. EPA
  - European Union: Mr. David Slater, Director, Pollution Prevention and Control, Environment Agency, United Kingdom
  - Asia and Pacific: Mr. Virah Mavichak, Director of Industrial Environment, Division of Industrial Works Department, Thailand
  - West Asia/Middle East: Dr. Ossama El-Kholy, Senior Advisor, Egyptian Environmental Affairs Agency, Egypt
- 15:30-16:00 Break
- Theme #4: International Capacity Building**
- 16:00-17:00 Speaker #3: Mr. Lal Kurukulasuriya, Chief, Regional Environmental Law Program, UNEP
- Environmental Law
- Speaker #4: Mrs. Jacqueline Aloisi de Larderel, Director, UNEP, IE, delivered by Mr. John Skinner, Senior Advisor
- UNEP Capacity-Building Workshops for Industrial Compliance
- Speaker #5: Mr. J. William Futrell, President, Environmental Law Institute
- Public/Citizen Participation: NGO Efforts
- Speaker #6: Ms. Susan Becker, Environmental Management Advisor, Sustainable Energy and Environmental Division, UNDP
- Regional and Country Action Plans; Capacity 21
- Speaker #7: Ms. Jean Aden, Institutional Specialist / EA Coordinator, Environment and Natural Resources Division, Asia Technical Department, World Bank
- World Bank Supported Environmental Institutional Building Investments
- 17:00-17:30 Instructions on Principles/Other Workshops, given by Cheryl Wasserman  
Instructions on the UNEP Workshops, given by Rob Glaser
- 19:30 Dinner Hosted by Conference Sponsors

**DAY TWO  
APRIL 23, 1996**

**WORKSHOPS ON PRINCIPLES OF ENVIRONMENTAL  
COMPLIANCE AND ENFORCEMENT**

Day Chair: Mr. Pieter Verkerk, Inspector General, VROM, The Netherlands

In small groups, workshop participants used case studies to explore the principles of environmental enforcement. Participants chose preferred case study subject matter:

**Coal Burning/Sulfur Dioxide Problems**

**Mining**

**Petrochemical/Refining**

**Deforestation**

**Residential and Industrial Waste**

**Tourism**

**Transboundary Illegal Shipments of Hazardous Waste, Toxic  
Chemicals (Pesticide), Contraband**

Using facilitated discussion and exercises, each workshop covered: designing a management approach; designing enforceable requirements; setting priorities; balancing compliance promotion and enforcement response; inspection strategies; defining enforcement response and evaluating results and responding to change. Also, each workshop included a role-playing exercise to demonstrate a process for resolving alleged violations involving complex economic, social and technical issues and uncertainties. Roles included enforcement officials, industry representatives, community activists, employees and others. Case study materials also provided information on environmental problems, pollution control and prevention approaches and their cost-effectiveness and sources of information

08:30-10:45	<b>Concurrent Workshops: Designing Management Approaches, Enforceable Requirements, and Effective Compliance and Enforcement Strategy</b>
10:45-11:15	Break
11:15-12:30	<b>Concurrent Workshops (continued)</b>
12:30-14:00	Lunch
13:30-15:30	<b>Concurrent Workshops: Resolving a Complex Enforcement Problem</b>
15:30-16:00	Break

- 16:00-18:30 **Concurrent Workshops (continued)**
- 18:30 **Cultural Event:** Traditional Khantoke Dinner and Show at the Old Chiang Mai Cultural Center, hosted by the Thailand Pollution Control Department

**DAY THREE  
APRIL 24, 1996**      **REGIONAL MEETINGS/UNEP INSTITUTION-BUILDING  
WORKSHOPS**

Day Chair: Mr. Steven Herman, Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S. EPA

Participants met in regional groups to discuss country programs and progress, shared problems and challenges, institution-building needs, opportunities for institutional support and exchange, proposals for regional networking, desired linkage to international capacity-building efforts and targets of opportunity. They were also provided an overview of four United Nations Environmental Program (UNEP) institution-building workshops on organizing compliance and enforcement programs, developing human and financial resources, designing permitting processes, and compliance monitoring and enforcement responses programs.

- 10:30-12:30 **Regional Meetings and Institution Building: UNEP  
Theme #5 Workshops**

**Africa**  
**Americas**  
**South Asia**  
**Southeast Asia and Pacific**  
**Central and Eastern Europe**  
**West Asia and the Middle East**  
**Western Europe**

- 12:30-13:30 Lunch
- 13:30-15:00 **Concurrent Regional Workshops**
- 15:00-15:30 Break
- 15:30-17:45 **Concurrent Workshops (continued)**

**DAY FOUR  
APRIL 25, 1996**

**SPECIAL TOPIC WORKSHOPS**

Day Chair: Mr. Pieter Verkerk, Inspector General, VROM, The Netherlands

Participants had an opportunity to attend two of fourteen workshop offerings. Facilitators ensured that workshops provided opportunities for active discussions with contributions by all workshop participants and for exploration of a range of issues defined for the topic. Participants in each workshop discussed these issues and contributed to the development of a paper reflecting discussions and consensus. The Executive Planning Committee solicited papers from participants with experience on these subjects and these individuals provided background information when needed during the workshop sessions.

**Theme #6 Special Topic and Institution-Building Workshops**

09:00-12:00	<p>Concurrent Special Topic and Institution-Building Workshops:</p> <p><b>Strategic Targeting</b></p> <p><b>Integrated Permitting and Inspection</b></p> <p><b>Promoting Voluntary Compliance: Environmental Auditing, Outreach, and Incentive Programs</b></p> <p><b>Public Role in Enforcement: How to Go About Creating and Supporting Effective Citizen Enforcement</b></p> <p><b>Criminal Enforcement: INTERPOL, Role of Criminal Enforcement in Environmental Enforcement</b></p> <p><b>Enforcement of Economic Instruments</b></p> <p><b>Creating Enforceable Permit Programs and Requirements: Discussion Focus on Water Pollution and Contamination of Drinking Water Supplies</b></p> <p><b>Transboundary Illegal Shipments of Hazardous Waste: Tricks of the Trade</b></p> <p><b>Organizing and Financing Programs</b></p>
12:00-14:00	Lunch
14:00-17:00	<p>Concurrent Special Topic and Institution-Building Workshops:</p> <p><b>Strategic Targeting</b></p> <p><b>Compliance Monitoring</b></p> <p><b>Promoting Voluntary Compliance: Environmental Auditing, Outreach, and Incentive Programs</b></p> <p><b>Measures of Success</b></p> <p><b>Communications and Enforcement</b></p>

**Public Role in Enforcement: How to Go About Creating and Supporting Effective Citizen Enforcement**  
**Criminal Enforcement: INTERPOL, Role of Criminal Enforcement in Environmental Enforcement**  
**Enforcement of Economic Instruments**  
**Creating Enforceable Permit Programs and Requirements: Discussion Focus on Water Pollution and Contamination of Drinking Water Supplies**  
**Montreal Protocol: Enforcement of CFC and Related Requirements**  
**Enforcement Policy and Authorities**

**DAY FIVE  
 APRIL 26, 1996**

**REGIONAL MEETINGS/PLENARY SESSION**

Day Chair: Mr. Pieter Verkerk, Inspector General, VROM, The Netherlands

- 09:00-10:00 **Concurrent Regional Meetings (continued from Day Three)**
- Africa
  - Americas
  - South Asia
  - Southeast Asia and Pacific
  - Central and Eastern Europe
  - West Asia and the Middle East
  - Western Europe
- 10:00-10:30 Break
- 10:30-12:00 **Concurrent Regional Meetings (continued)**
- 12:00-13:30 **Lunch**

- Theme #7: Making Progress: Regional Examples, Capacity-Building Agenda, International/Regional Networks**
- 13:30-15:30** Plenary session highlighting country examples of success and program improvements since the last Conference based upon written reports for the proceedings and discussions at the regional meetings, conclusions of regional meetings on shared problems, future cooperation, and capacity building.
- Moderator:** Mr. David Slater, Director, Chief Inspector, Her Majesty's Inspectorate of Pollution, England and Wales.
- Speakers selected by Day Three regional meeting participants.**
- Africa
  - Americas
  - South Asia
  - Southeast Asia
  - Central and Eastern Europe
  - West Asia and Middle East
  - Western Europe
- Discussion Session:**
- Where to Next: International and Regional Networking for Successful Environmental Compliance and Enforcement
- 15:30-16:00** **Closing Session:**
- Day Chair:** Mr. Pieter Verkerk, Inspector General, VROM, The Netherlands
- Co-Chair:** Mr. Steven Herman, Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S. EPA
- 16:00-16:15** Press conference
- 16:00-17:00** **Closing Reception**

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## WELCOME AND INTRODUCTION TO THE CONFERENCE

HERMAN, STEVEN A.

Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S.  
Environmental Protection Agency, 401 M Street SW, (MC-2211A) Washington, D.C.  
20460, USA

Ladies and gentlemen, Minister Yingpan Manasikarn, Governor Virachai Naewboonien, Honorable Reuben Olembo, honored speakers, and panelists, on behalf of my co-chair, Mr. Pieter Verkerk and our Executive Planning Committee, it is my privilege to welcome you to the Fourth International Conference on Environmental Compliance and Enforcement.

Six years ago, the first international conference on environmental compliance and enforcement was held in Utrecht, The Netherlands, and was attended by approximately 20 countries. Since that auspicious beginning, conferences have been held in Budapest, Hungary, and in Oaxaca, Mexico - with each conference growing in both size and stature.

Here in Chiang Mai, Thailand, 100 countries and international organizations are represented, making this the largest international environmental enforcement and compliance conference ever.

The tremendous growth we have seen in the participation at these conferences reflects an increased awareness world-wide that environmental pollution affects us all. It affects our economies, our productivity, and our health and overall quality of life. And most of all, it affects these things for generations to come.

Each one of our countries, to varying degrees, has laws which govern sources of pollution. Through the enforcement of these laws, and through finding ways to ensure full compliance with their mandates, we can curb environmental degradation.

That is what brings us here to Thailand for this conference.

Look around you. It is the caliber of the participants and the quality of the dialogue that made the last Conference in Oaxaca stand out in my experience as one of the most inspiring moments in my service as head of environmental enforcement for the U.S. Environmental Protection Agency. This conference gives us all an opportunity to get to know and work with our environmental enforcement colleagues from around the world on what is a great and complex mission - to achieve environmental protection inside and outside of our countries' borders through compliance with our environmental laws. Indeed, we must even look beyond compliance to prevent pollution before it occurs.

In order to accomplish these objectives, we must rely upon many enforcement and compliance related tools. Strong and aggressive enforcement responses are often necessary to punish polluters, prevent future violations, and provide the very means for cleaning up the environment and protecting the health of our people. Compliance also depends on our ability to encourage change in the face of what, to some people, may seem to be competing economic and social goals. It is our task to respond to the demands of the public for environmental protection, environmental justice, and environmental quality, for these go hand in hand with sustainable growth and responsible development. And we must do so with an economy of resources, as our budgets are not limitless.

In the United States, these past two years has been a time of change - within our environmental programs overall, within our enforcement and compliance programs in particular, and within the overall political landscape. And I can say without a doubt that my past 3 years at

Environmental Protection Agency have been the most tumultuous in my 19 years of Federal service. Indeed, for the first time in more than twenty-five years, the previously unquestioned role that the government must play to ensure environmental protection was challenged. Attempts were made to undercut regulatory authority, and to slash Environmental Protection Agency's budget.

This debate continues in our government, even as I speak today. But throughout this debate there has been one resounding constant, from which there cannot be a greater motivation for the work we do - the people of our nations want protection from pollution, and demand enforcement of our environmental laws to ensure that they receive that protection. The American public's expectation of protection from environmental hazards drives our enforcement and compliance program. It gives clarity to our mission. I know that the people of your countries share those views.

And the overwhelming support of our respective populations is our ultimate strength.

We know that environmental enforcement and compliance works. In the United States, the enforcement and compliance program relies upon everything at its disposal to make it work - strong criminal and civil cases, swift administrative actions, policies and programs which provide incentives for companies and government agencies to voluntarily step up to the mark to confront their environmental problems, and assistance for businesses to help them understand the laws and regulations with which they have to comply. These efforts are rooted in the simple principle that polluters must be held accountable for their actions.

And examples of our successes in these efforts abound:

- As a result of an enforcement action against General Motors, the automaker has agreed to recall nearly half a million cars which failed to control the pollution from their tailpipes as required by the law. This means the elimination of over 100,000 tons of illegal excess carbon monoxide which would otherwise foul the air.
- Another case was brought against a lead refinery which for over 100 years had dumped lead, arsenic, and other pollutants into the adjoining river, while illegally operating without a permit. As a result of that enforcement action, it is now installing water treatment facilities it never had, acquiring wetlands or wildlife habitat, and doing sampling to ensure that it operates in full compliance with the law.
- Because of other recent actions, a mining company in the State of Michigan will no longer dump high levels of mercury into the Great Lakes, or pollute the air with illegal amounts of sulfur dioxide. Another mining company will begin restoration efforts on fifteen miles of creeks and tributaries of the Ohio River, which had been decimated from the effects of that company's illegal release of abandoned mine wastewater.
- A land developer who had flouted the advice of environmental consultants, and willfully and illegally filled in approximately 70 acres of wetlands for commercial development was convicted as a criminal by a jury of his peers.
- The public's right to know about toxic chemicals being released into its communities was enhanced by the U.S. Environmental Protection Agency's nation-wide Toxic Release Inventory enforcement initiative against 47 companies last June.

- These, and other cases, large and small, led to the reduction of thousands of tons of pollutants being dumped into our rivers and streams, leaked into our soil, and spewed into our air by violators.
- These enforcement successes benefit us all. That is one of the overarching messages from each of our international conferences. Progress and environmental protection in one country benefits each of its neighbors - we are all affected.

But our environmental enforcement and compliance program is not limited to filing suit to compel companies to comply with the law. After all, violations of the law, and illegal pollution, must be stopped immediately when they occur - not just when they are discovered by our Agency. To accomplish this, we must enlist the private sector in the battle to ensure compliance. Incentives to comply, and assistance to do so when needed, are also a part of our effective enforcement and compliance program.

Government cannot achieve these things on its own. Compliance with the laws is the responsibility of all of our citizens and businesses. Both on their own, and in response to strong enforcement actions, many companies are in fact making responsible efforts to comply with the environmental laws. Our enforcement and compliance program seeks to encourage and foster this behavior.

One way we have been doing this is to encourage companies to perform environmental audits of their operations, and to self-report, and self-correct any violations that they discover. We are trying to show the benefits of having a comprehensive environmental management system in place, one that on its own, seeks to detect and correct violations.

Environmental audits, and good management systems, make those businesses partners in protection with the Environmental Protection Agency - though the responsibility for discovering, reporting, and correcting any violations remains squarely with them. In that regard, last December, U.S. Environmental Protection Agency issued a final policy on incentives for self-policing. The policy offers incentives to companies to self-monitor, self-report and self-correct, and to establish comprehensive management systems. Disclosure, correction, and prevention - these are concepts which the policy takes to large and small companies in every state in our country.

We are also about to issue a final policy on compliance incentives for small businesses, and one for small communities. These policies also create incentives for small businesses and small communities to look for, report, and correct any environmental problems they may have. They too must be partners in protection if we are to have an effective, and comprehensive, enforcement and compliance program. Our policy on small communities also encourages those communities to begin to immediately address those environmental problems that pose the greatest risk - to the health of their citizens, and to the environment.

Together, these policies and others recognize that environmental results are best achieved when a company monitors their own pollution practices; and they recognize that environmental results are achieved when those who come forward to correct their violations are treated differently - better - than those who abuse the public trust.

We have also created national compliance assistance centers, which provide companies with information about the applicable environmental laws and regulations. These centers will also have the latest information on pollution prevention techniques, so that companies can move themselves beyond compliance, and into cleaner and more efficient operations.

These new compliance assistance programs, and compliance incentive policies - many of which we have developed and implemented since our last international conference in Oaxaca - do not replace our traditional enforcement program - they add to it.

In everything that we do - whether it is with strong criminal and civil - enforcement actions, or compliance incentives policies - there is another over-riding principle that we follow - we know that the public must always be informed. We have continually stood for the public's right to know about what is in the water that they drink, the food that they eat, and the air that they breathe. We have rejected the concepts of secrecy and immunity. And we have insisted on corporate accountability, and preserved a strong enforcement presence in the process.

We can do all this because our enforcement and compliance program uses a mix of tools to achieve environmental protection through compliance.

Some people think that enforcement and compliance assistance are mutually exclusive. This is not the case! It is not an "either" "or" proposition. It is not "compliance" or "enforcement." We have many options at our disposal and we can, and must, use them all. The problem of noncompliance has many faces, and there is no single solution, or approach, which can eliminate this problem. Only a combination of approaches will be effective in the long run. We will examine these tools and approaches at this conference.

But we must be clear about it - there is no substitute for the ability of vigorous enforcement to level the playing field for those who comply with the law. Polluters cannot be ceded an advantage in the marketplace. Pollution havens cannot be tolerated either nationally or internationally. There is no substitute for the ability of vigorous enforcement to deter future violations, sending a strong message that polluters will pay—both in cash and in public perception.

The reality is that pollution does not recognize local, state, provincial, or international boundaries, and companies are no longer regional, they are often national and multinational in scope and operation.

But we have limited resources and must find ways to work together, with a focus on risk, and to move swiftly against violators whose behavior shows no regard for the safety of their neighbors and the environment.

We must work directly with other nations - with each other - and our own regional and local governments, to make sure that our resources are directed to where they can be used most effectively. And we must continue to solve problems that cut across boundaries - pollution affects us all, regardless of where we live.

As I said earlier - we cannot do it alone. Environmental protections through enforcement of our laws is the responsibility of us all - whether we are in government or private business - in every one of our nations. The partnerships which must be established are essential to our success. That is one of the prime benefits of this conference - and the opportunities to make these partnerships, and to make them work, must be seized by us all.

The next five days together will provide us with great opportunities to explore many issues surrounding environmental enforcement and compliance.

- Fairness is one such issue - an appropriate enforcement response must achieve results that are fair, not only for the environment but also for those companies who have made the necessary investments to comply in the first place. No one should ever gain an economic advantage by violating the law. And no one should be put at a disadvantage because they have obeyed the law.
- We will also explore how to maximize our enforcement responses through communications and voluntary compliance initiatives, and how to use the various civil and criminal authorities we have to the greatest advantage.
- We will explore how best to monitor compliance and the mix of government inspections, self-monitoring requirements, citizen complaints, and the potential to leverage third party audits.

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- We will explore the new economic challenges facing enforcement, and how to finance and organize programs which draw upon the many skills and professional demands of our complex programs.
  - We will explore the essential role of the public in compliance and enforcement and new ways to employ communication strategies as an effective tool for enforcement.
  - And we will explore how to design requirements that are more easily enforceable.
  - As a community of nations, we will explore how to ensure that success in one country does not result in the transport of waste, banned toxic and hazardous substances across our borders imposing new burdens on countries already struggling to secure a more promising economic future.
  - And importantly, we will consider our capacity building needs -both for those developing and those seeking to enhance their programs. We will try to match the resources and support available internationally, bilaterally and regionally with the needs of our various countries. If we are successful in doing this, then we will have truly left a lasting legacy from these conferences.

We have a rich base of information on which to draw for these discussions. I want to take this opportunity to offer a note of appreciation to our colleagues who took the time out of their busy schedules to put on paper their experiences and the lessons they have learned. We will add to the substantial proceedings volume with additional papers and results from our discussions throughout the conference.

I also want to recognize the support of the cosponsors of the Conference and Executive Planning committee members who supported the development of new technical capacity building documents and those of you who contributed to these, requiring substantial commitments of time and energy. We invite you to review and perhaps add your own experiences before these documents are finalized.

We will now reach a far broader audience on a sustained basis by creating a home page on the internet. It will be keyed off of U.S. Environmental Protection Agency's Enviro\$en\$e and Earth 1 Site, with cross links to information provided by all conference cosponsors. I invite each of you to visit the exhibit area to view the videos, review the materials and try out these sources of information on program capacity building.

Over the past ten years, we have expanded collaboration among Conference sponsors, including colleagues from the United States, The Netherlands, United Nations Environment Program, Environment Canada, the European Union, the Environmental Law Institute, the World Wildlife Fund, the Governments of Hungary, Mexico and Thailand, other members of the Executive Planning Committee from Chile, Costa Rica, Nigeria, South Africa, the United Kingdom, Poland, Malaysia, Indonesia, China and the Philippines, and institutions such as the World and Regional Banks.

All of us have made a commitment to learn from each other. Environmental pollution is both a national and an international problem. Through these conferences, and through continued cooperation, we can ensure that environmental enforcement is both a national and an international solution.

And, in that light, I want to express appreciation on behalf of all of us to our host country for their gracious hospitality, and for providing yet another inspiring location for this conference.



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## EVOLUTION OF ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT PROGRAMS IN THAILAND AND CURRENT CHALLENGES

MANASIKARN, H.E. YINGPHAN

Minister, Ministry of Science, Technology and the Environment, Rama 6 Road,  
Rajdhavee, Bangkok 10400 Thailand

Mr. Chairman, Distinguished Delegates, Ladies and Gentlemen, first of all, let me congratulate the Executive Planning Committee and the co-sponsoring agencies and all concerned on the well organized Fourth International Conference on Environmental Compliance and Enforcement. I would also like to express my thanks for giving an opportunity to Thailand to be the host of this important event. It is my very great pleasure to welcome you on behalf of the Government and the people of Thailand to this international conference. I hope that all of you had a pleasant journey and will enjoy your stay here in Chiang Mai.

We are aware that environmental problems have become global issues and are viewed within the larger context of sustainable development. Effective domestic environmental compliance and enforcement programs are an important factor in global efforts to solve environmental problems. The Royal Thai Government also considers environmental issues top priority by substantially increasing the annual budget to take both remedial and preventive measures. As a basis for achieving effective environmental management, Thailand has enacted a new environmental law, namely the Enhancement and Conservation of National Environmental Quality Act 1992 by amending the previous environmental legislation acts of 1975 and 1978.

Key features and effects of the new legislation include enhancing the National Environment Board to become an active policy-making body; introducing the Polluter Pays Principle; establishing the Environment Fund to assist polluters in controlling and eliminating their pollutants; creating more stringent environmental standards and setting proper systems; providing promotional measures; and establishing civil liability and penal provisions as well.

The new legislation empowers the National Environment Board which is chaired by the Prime Minister. The Permanent Secretary of the Ministry of Science, Technology and Environment serves as secretary to the Board. This emphasizes the government's concern about the environmental issues at the ministerial level. Regarding the Polluter Pay Principle, we incorporate the use of economic instruments, which provide economic incentives to polluters to change their behavior. It seems to be more effective than the normal command and control measures. The owner or possessor of the pollution source is held responsible for meeting the cost of construction and operation of the treatment facilities or another option is to use the central treatment or disposal plant belonging to the government by paying service fees.

Regarding the Environment Fund, this fund was established to facilitate the Polluter Pays Principle and is jointly managed by the National Environment Board and the Ministry of Finance. It provides grants to governmental agencies and low-interest rate loans to the public and private sectors for installation of pollution control equipment, treatment of pollutants and disposal of hazardous wastes. The recipients of the funds have an obligation to use the money "specially for the purpose of meeting the requirement with which the borrower has the legal duty to comply under the environmental law or other related laws".

From the point of view regarding environmental protection, the National Environmental Board is responsible for the prescription of a national environmental quality standards program for all water resources, atmospheric ambient air, noise and vibration and any other environmental concerns. In this connection, the Ministry of Science, Technology, and Environment has formu-

lated an action plan called the Environmental Quality Management Plan. This plan provides the work plans and guidance for action concerning the management of air, water, natural resources, pollution control from the sources, estimate of funds to be allocated from the Fund, enactment of laws and regulations for implementation of the Plan.

To further promote environmental quality, important consideration is given to pollution control, which is prescribed under the Environmental Quality Act of 1992.

There is a Pollution Control Committee which is chaired by the Permanent Secretary of the Ministry of Science, Technology and Environment. One of the primary duties is to give advice on the setting of emission or effluent standards for the control of wastewater discharges, polluted air emissions, or discharges of other wastes or pollutants from various sources into the environment.

In the area deemed by the National Environment Board to have an aggravated pollution problem which may cause health hazards to the public or adverse impact on the environmental quality, it designates these areas as pollution control areas. In this event, each Provincial Governor in the area is authorized to prescribe a more stringent set of emission or effluent standards for the area, in order to control and reduce the pollution.

So far, there are ten designated pollution control areas resulting from this legislation: Pattaya, Phuket, Pee Pee Island (Krabi), Had Yai and Muang District of Songkhla Province, Samut Prakarn, Pathum Thani, Nonthaburi, Samut Sakorn and Nakorn Pathom.

As I mentioned earlier, this new environmental legislation provides an enhanced scheme of penalties. Those who opt to illegally dispose their waste products and waste water are liable for a penalty four times the cost of the service fees, until full compliance with provisions of the environmental legislation is achieved. In addition, those who are required to have their own on-site waste and waste water treatment facility but fail to do so, and illegally discharge their waste waters or wastes into the central waste water treatment plant or the central waste disposal facility, are subject to daily fines of four times the daily costs of normal operation of such on-site facilities, plus any damages to the central treatment plant or disposal facility resulting from their illegal activities.

Additionally, this new law also provides inducement measures. A party who owns or possesses a point source of pollution and plans to install an on-site treatment facility, whether or not he is required to do so by law, is entitled to request assistance from the government regarding import duties of the necessary machinery, equipment and materials for the facilities which are not available in Thailand. They are also allowed to bring in foreign experts and specialists concerning the construction and operation of the facility if such qualified persons are not locally available. The foreign specialists may also be exempt from taxation of their income earned in Thailand for the purposes of construction and operation of the facility.

Currently, Ministry of Finance, Ministry of Industry and Ministry of Science, Technologies and Environment have an initial agreement regarding tax measures for environment management.

Violators of the regulations are liable to pay compensation for all damages resulting from contamination including any expenses incurred for clean-up of pollution and the value of any natural resources destroyed or damaged in the process. Furthermore, the criminal liabilities for violation range from one month to five years imprisonment and/or fines of Baht 10,000 to 500,000 or US \$400 to \$20,000.

This new government policy and legislation shows that Thailand is strongly determined to solve environmental problems effectively. The Thai Government, through the Ministry of Science, Technology and Environment has established policies to support environment oriented

investment in order to manage environmental quality and build mechanisms for private sector participation in waste management and to encourage people to recognize the value of natural resources as a common property.

As I have already mentioned, there is still much to be done in the area of environment. Cooperation and collaboration at national, regional and global levels is essential to achieve tangible results. I greatly appreciate the joint effort of international agencies to organize this important international conference, which I am sure, will be a great benefit to us all. I hope that with your participation and contribution, the Conference will be successful and wish you a safe return to your country.



## CHIANG MAI'S ENVIRONMENTAL CHALLENGES

NAEWBOONNIEN, VIRACHAI<sup>1</sup> and WONGBURANAWATT, JAKAPAN<sup>2</sup>

<sup>1</sup> Governor, Chiang Mai, Provincial Hall, Chotana Road, Muang District, Chiang Mai, Thailand

<sup>2</sup> Dean of Social Sciences Faculty, Chiang Mai University, Chiang Mai, Thailand

Mr. Chairman, Ladies and Gentlemen, first of all let me thank the organizers and all the rest of you present for having chosen Chiang Mai as a venue for this very important meeting. Actually, as we all already know Chiang Mai depends on tourism so the more people we get to come to Chiang Mai the better the economy will be. Therefore, before I forget let me just say now that while you are here in Chiang Mai spend a lot of money, buy everything in sight, buy as much as you can. If you have a problem at all with that let me know I can help you. I am sure you have a lot more money at home so whatever you have brought with you spend it all at Chiang Mai.

A week ago Chiang Mai celebrated its 700th anniversary so this is a very old town, one of the oldest cities in the world, I do not know if you realize that. We have a lot of problems. My job this morning is to welcome you and then present something under the heading of Chiang Mai's Environmental Challenges. As a political administrator, I do not have much time to go into the details of the various aspects of our environmental challenges. My immediate problem is to raise the standard of living of the people within my country. Just yesterday the queen was up in the palace over the hill visiting the very outlying village, a very far away distance from Chiang Mai and about 1,000 hill tribes came and visited her and received her. Every time she goes out of the empire a medical unit goes with her to look at the problems of the people. The majority of the people are living below the accepted level. Only one district in all the 24 districts of Chiang Mai has proper toilet facilities. We have 23 districts that do not have proper toilet facilities. This is just one example of the need to bring up the level of living conditions. I personally think that is more important than the environmental problem of the sector. Not that we do not give attention to environmental problems, we do. The provincial authority at Chiang Mai has asked the Faculty of Social Science at Chiang Mai University to study the environmental problems of Chiang Mai and come up with a plan as to how to go about solving these problems. We asked them to identify the challenges we have so this morning I would like with your permission to introduce a colleague of mine who has prepared this environmental plan. He is the Dean of the Social Science Faculty of Chiang Mai University, Dr. Wongburanawatt.

I have been given ten minutes to give this speech and I have spent about five minutes in introduction. I think that's the limit of my ability to speak English at the moment. I would like Dr. Wongburanawatt to come up here and in the ten minutes remaining give you a picture of the challenges of Chiang Mai as concerns the environment.

\* \* \*

Thank you very much Mr. Governor, Mr. Chairman, Ladies and Gentlemen. It is a great honor for me to have a chance to say a few words right after the Governor of Chiang Mai this morning at the Fourth Conference on Environmental Enforcement. As you know Chiang Mai just celebrated our 700th anniversary. Chiang Mai is a very ancient city that is still alive in Thailand. Even though we are a very old country the city has not died or passed away.

With time, particularly within the past five years, Thailand has put a great emphasis on environmental issues. Especially three years ago, when the Thai Government asked each province to come up with an environmental plan. As the Governor has just mentioned Chiang Mai University was assigned to study and to recommend ways to solve environmental problems. As the Director of Social Science we are honored to do so.

In the next ten minutes I would like to give you some background information concerning Chiang Mai. The population of Chiang Mai is approximately 1.5 million persons above the 2.4 million number of tourists each year. That means that though tourists bring a lot of money to Chiang Mai they also contribute to environmental damage as well. In Chiang Mai the population of 1.5 million consists of some tribal people and some island people. Right now we have about seven tribes the Meo, Karen, Yao, Lisu, Lawa Lahu and Akha. Besides those tribes we also have the Burmese minority and the Chinese minority right up to the second world war. For being a major tourist city with also a very ancient history we have remained open. Chiang Mai also has a future potential role in environmental issues. At present Chiang Mai is the principal city in the upper north region and also has the role of bringing corporations to the nearby provinces as well as form economic environmental policy which will try to promote corporate growth in Thailand, China, and Laos. It is predicted in the next fifteen to twenty years that Chiang Mai will become the center of progress in various areas such as the Center for Human Resources and Development for the country and also for Indochina as well. Chiang Mai will be the center for our international tourism, the center for international corporate banking and finance, as well as the center for communications, transportation, and telecommunications. Chiang Mai also expects to be the center of agroecology and industrial agriculture for local consumption and exports. Chiang Mai will also be the center for education and cultural conservation as well as the center for high technology industry.

The mentioned potential of Chiang Mai may also cause some environmental risk and pollution. For the limited time I would like to mention key points of environmental problems of Chiang Mai. The first problem is water pollution especially in the municipal community. As I indicated earlier Chiang Mai is host to 2.4 million visitors a year. Above this, the number of people in the Municipal area is 250,000 and they produce a waste of approximately 50 cubic meters a day. There is also water pollution from factories and from public housing sewage. In Chiang Mai we now have nearly 2,000 factories, more than 50 % of which are located in the city area nearby. These factories release both water and air pollution that can be harmful to health even though they have installed some pollution prevention and a treatment systems. Besides those factories there are about twenty public housing sewage systems in Chiang Mai. The amount of waste water from this comes up to 450 cubic meters per hour and even though they have some treatment some contamination was still detected in the water sources. The biological oxygen demand (BOD) checks indicate there was still a high level of BOD in the water.

The third problem is air and noise pollution. The statistics of patients suffering from respiratory diseases show that in 1994 there were as many as 500,000 patients in hospitals suffering from respiratory problems. This shows that the future of Chiang Mai will face more serious pollution of this type due to the present factories and also transportation that may cause more air and noise pollution. Of both problems another significant one is the community solid waste, solid waste has become a major political issue. When they were campaigning to run for the Governor of Bangkok metropolitan area one of the key issues according to Yingpan's lecture was to solve the solid waste problem in Bangkok. That is why in Chiang Mai we have the legend of the bear, of the city municipality, and one of the key issues that faces the republic is the residential solid waste problem. In Chiang Mai right now within the municipality we have about

250 tons of garbage and solid waste a day. We still have a serious problem and need to solve it.. Besides those problems Chiang Mai also has special problems like degraded forest, according to statistics in 1976 90% of Thailand was in forest, in 1993 only 71% is forest.

Chiang Mai University is developing three major plans to protect the environment. The first concentrates on rehabilitation of present resources, water, land and air. Second concerns prevention of future pollution. Thirdly, is the importance of promoting public awareness of environmental issues and the importance of a healthy environment. We look forward to sharing our plans as they are further developed and ask that you please enjoy your visit to Chiang Mai.



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## REACHING OUT TO OTHERS FOR EFFECTIVE ENVIRONMENTAL ENFORCEMENT

DE BOER, MARGARETHA<sup>1</sup> (DELIVERED BY VERKERK, PIETER J<sup>2</sup>.)

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Mr. Chairman, Honorable Colleague from Thailand, Esteemed Governor of the Province of Chiang Mai, Ladies and Gentlemen, I would first of all like to express my appreciation to the Royal Government of Thailand for being so willing to jointly organize this conference. The pollution control department has also played a very important part in the preparation of the conference. Thanks to their efforts we can now begin this Fourth Conference, a conference which I am confident will be a success. The information I have seen about the number of participants, the number of participating countries and the program itself, has convinced me that the organizers, assisted by the members of the Executive Planning Committee, have done a first-class job with the preparations.

### 1 INTRODUCTION

This is the fourth time, after Utrecht in 1990, Budapest in 1992, and Oaxaca in 1994, that a minister of the environment of the Netherlands has made the opening speech to the conference. These speeches reflect a very clear progression in enforcement matters. In the beginning the emphasis was especially on the setting up of our own enforcement organization and building up and propagating knowledge and skills. We have made a lot of progress since the earlier conferences. The initiatives started during these conferences are clearly showing results. Enforcement of environmental legislation is a matter of importance, both at a national level in the Netherlands, and at an international level. The importance of this enforcement is generally recognized, and is receiving a great deal of attention.

But—as is so often the case when our knowledge of a subject is still in development—we have seen that as our knowledge of the subject has increased, so too have our problems. We are confronted with environmental crime, transfrontier waste shipments, definitions of reuse, and general differences in definitions for waste substances in the various conventions.

### 2 DEVELOPMENTS IN THE NETHERLANDS

The priority areas in environmental policy in the Netherlands are agriculture, industry, waste (shipment), and pollution of the soil, air, and water. The National Environmental Policy Plan was drawn up to organize and plan the approach to these problems. The plan also ensured that the enforcement activities were synchronized to the other activities. All parties involved in

enforcement participate in the National Coordination Committee for Environmental Law Enforcement. The parties involved are the Ministry of Housing, Spatial Planning and the Environment, the Ministry of Agriculture, Nature Management and Fisheries, the Ministry of Transport, Public Works and Water Management, the Ministry of Economic Affairs, the Ministry of Home Affairs, the Association of Provincial Authorities, the Association of Netherlands Municipalities, the Association of Water Boards, the Board of Chief Commissioners of Police, and the Public Prosecutions Department. The committee is responsible for synchronizing and stimulating the broad outlines of the enforcement of environmental legislation.

There are other new developments which also require attention, including the integration of the environment and spatial planning, and the environment and the economy. Another important development is the emphatic placing of the responsibility of implementing (and enforcing) environmental legislation with the parties involved. Lower-tier authorities and companies, should bear the responsibility for their own environmental behavior. Companies with a corporate environmental care system show that they have adopted a responsible attitude towards the environment, and towards the relevant regulations. A company with a certified environmental care system can demonstrate to the inspecting authority that it views the environment as being of great importance. This can then also be reflected in the form and the content of the licenses issued to the company. It also means that the authorities responsible for enforcement duties should also make use of this specific information.

The exact way in which this new approach will be implemented needs to be worked out in more detail, especially with regard to enforcement. As part of this approach, agreements will be made between government and branches of industry about the contributions each branch of industry will make towards achieving the environmental objectives. These agreements will be set down in writing for each branch of industry, and they will also be incorporated in the environmental license issued to each individual company. Each complete branch of industry will be answerable for compliance with these agreements. I have also recently submitted a proposal to Parliament for the introduction of a compulsory environmental report by some 300 large companies in the Netherlands liable to such regulations.

Progress has also been made in working relationships with lower-tier authorities in the Netherlands. In accordance with the National Environmental Policy Plan they have received the funds to enable them to take up their environmental duties. Within the National Coordination Committee for Environmental Law Enforcement it has been agreed that continued efforts will be made to increase both the quantity, in terms of the environmental licenses issued, and the quality, in terms of the enforcement of environmental legislation.

A start will also be made with the monitoring of the performance of government in the area of environmental policy and enforcement, in particular with regard to specific target groups from the National Environmental Policy Plan.

The National Coordination Committee for Environmental Law Enforcement is also responsible for a report to the lower House of Parliament on the results of the enforcement of the environmental legislation as achieved by all members of the committee. This report is published every two years.

### **3 INTERNATIONAL DEVELOPMENTS**

The Netherlands is not an isolated state. It is part of the European Union, which is one reason why it is very interested in the involvement of other member countries in the enforcement of environmental legislation. This is the reason why the Netherlands participates in the European

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Union Network for the Implementation and Enforcement of Environmental Law - the IMPEL network.

You will be offered more information about this in other contributions to the conference. This initiative of the member countries was warmly welcomed by the European Commission. The Netherlands is conducting a number of trial projects in the area of transfrontier shipments of waste and the notification of new substances, which also constitute initiatives towards a joint European approach to enforcement.

The objective of this is to achieve a professional Pan-European approach to the enforcement of environmental legislation. The European Union is not the only region considered to be of importance by the Netherlands. The Netherlands also make their knowledge and experience available to the United Nations Environmental Program. Special attention is also being given to the developing East European countries, and again the Netherlands are making their knowledge available to this region.

This is why I place so much importance on this Fourth International Conference on Environmental Compliance and Enforcement. By participating in this conference for the fourth time in succession, the Netherlands once again offers its support to developments which we consider to be of great significance.

#### **4 FUTURE DEVELOPMENTS**

I mentioned earlier that we in the Netherlands have encountered the problem of environmental crime. This is an international form of crime, and I am of the opinion that it is important that, as far as is possible, we also fight this sort of crime internationally. This is why it is so important that the participants of this conference come from so many countries, and from important international organizations. We have extended our enforcement network in the Netherlands to include organizations such as the police, customs, and the port authorities. Similar developments can be seen in other countries. International cooperation is the only way we will be able to achieve results sufficient to be able to maintain the durable development of our world for ourselves and for our children.

An increasing amount of international environmental legislation is coming into effect, for example, the Basel Convention, the Montreal Protocol, and the Convention on Biodiversity. If we wish these treaties to be credible then we must bridge the gap between implementation and enforcement. In relative terms, there are many international conferences about new regulations, for example, the negotiations about the Prior Informed Consent (PIC) Convention, but few about enforcement. International discussions about enforcement are complicated by factors such as the sovereignty of individual countries; nonetheless we cannot neglect the question of enforcement if we wish to give credibility to all the international conferences about new environmental regulations. Perhaps we should make a cautious start with conferences such as these, where we give training, and help build capacity.

Together with the United Nations Environmental Program we should give some thought to an informal network such as the European Union Network for the Implementation and Enforcement of Environmental Law. It would be of benefit if this conference stimulates such thoughts.

## 5 CONCLUSION

I would like to wish all participants a very successful conference. It will be a very busy conference for you, and you will have much to do in the working sessions. When you participate in these sessions it is very important that you relate the knowledge and experience you acquire during the course of the conference to the conditions, culture and organization in your own country. The principles of the enforcement of environmental legislation are universal; it will be up to you to apply them with the knowledge and experience that you acquire in the field.

It is important that the regional enforcement networks which come into being as a result of this conference will take root and grow further. I am very interested to see the results and I am pleased to be able to inform you that the Netherlands is certainly willing to participate in the organization of a Fifth International Conference on Environmental Compliance and Enforcement.

I wish you all a very successful conference.

## THEME #1:

# DRIVING FORCES BEHIND ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT PROGRAMS

Theme 1 papers address the following issues:

- The driving forces that gave rise to a decision to create or enhance an environmental compliance and enforcement program or to respond to particular noncompliance problems.
- Issues that arose in developing or enhancing a program, including options considered or selected.
- Particular challenges facing rapidly industrializing, developing, developed, and transitional economies trying to enhance or establish effective environmental compliance and enforcement programs, including issues such as economic and political uncertainty, level of support for environmental concerns, tradition of enforcement and compliance, and limitations on availability of human resources with necessary skills and experience in the field.
- Where appropriate, how these driving forces have affected actions taken, what resources would be brought to bear, how to establish priorities, how to effectively follow through on problems found, what human and financial resources were determined to be needed, and some of the considerations made in deciding how to develop or acquire those resources.

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2.	Driving Forces for Environmental Compliance and Enforcement: Sustainable Development, International Trade, Public Pressure and Involvement in Decision-Making and the Implications for Cleaner Production, Environmental Law, and Sustainable Development, <i>R. Olembo</i> .....	37
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See related papers from other International Workshop and Conference Proceedings:

1. The Challenges of Environmental Enforcement in a Developing Country: The Nigerian Experience, *A. Adegoye*, Volume I, Oaxaca, México
2. Environmental Compliance Issues During the Privatization Process in Poland, *P. Syrczynski*, Volume I, Oaxaca, México
3. Summary of Theme Discussion: Environmental Enforcement Challenges, *Moderator: A. Adegoye, Rapporteur: A. DeLong*, Volume II, Oaxaca, México
4. Membership of the EEC: What it Means for Environmental Requirements and Enforcement, *R. Macrory*, Volume I, Budapest, Hungary
5. Upgrading of Environmental Laws in France as Part of the Requirements by the EEC, *P. Kromarek*, Volume II, Budapest, Hungary
6. Some Factors Influencing Environmental Enforcement in the CSFR, *E. Kruziková*, Volume II, Budapest, Hungary
7. Environmental Enforcement in Greece, *M. Vassilopoulos*, Volume II, Budapest, Hungary
8. The Role of Industry: Empowerment and Environmental Protection, *J. Plaut*, Volume II, Budapest, Hungary
9. Environmental Problems in the Hungarian Privatization, *I. Mándoki*, Volume II, Budapest, Hungary
10. Summary of Theme Discussion: Context for Enforcement, *F. Uijting*, Volume II, Budapest, Hungary

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## SUMMARY OF PANEL DISCUSSION OF THEME #1: DRIVING FORCES BEHIND ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT

Moderator: Cheryl Wasserman  
Rapporteurs: Shari Oley, Kenneth Rubin

### GOALS

Presentation of driving forces that gave rise to a decision to create or enhance an environmental compliance and enforcement program or respond to particular noncompliance problems. Discussion of issues that arose in developing or enhancing the program. Address issues of particular relevance to rapidly industrializing, developing, developed and transitional economies, including economic and political uncertainty, level of support for environment, tradition of enforcement and compliance, and limited human resources, along with ways to overcome these obstacles.

### 1 PRESENTATIONS

Mr. Reuben Olembo, Deputy Executive Director of the United Nations Environment Program, delivered the keynote address on forces driving environmental compliance and enforcement. Ultimately, there is only one driving force: the inescapable need for environmental protection and sustainable development to go hand in hand. As discussed at length at the 1992 Earth Summit, there are six global environmental priorities that must be addressed to make sure that development meets the needs of the present without compromising the ability of future generations to meet their own needs. These are: atmosphere and climate; deforestation and desertification; fresh water and the oceans; toxic chemicals; biodiversity, and energy and natural resource consumption. The hard realities behind these issues are driving the need to build institutional capacity for environmental compliance and enforcement. Mr. Olembo pointed out that there are also three broader driving forces. The first is public demand, one of the most vocal of societal forces that has stimulated a great deal of positive change in many countries. The second, more subtle than the first, is industry's drive to compete globally because cleaner production ultimately makes good economic sense. The third driving force is the emergence of international standards of practice and trade, such as ISO 14000, that catalyzes a country's government to bring their own industries up to speed on environmental management in order to be internationally competitive.

Dr. Dorothy Bowers, U.S. Technical Advisory Group to ISO 14000, discussed the driving force of voluntary programs. Industrial commitment to good environmental management systems should be based on a plan-do-check-act model whose steps are: define policies and get top management commitment; put in place the organization and system; set objectives and targets; set in place findings programs; set in place audit programs; and retool the organization and system if needed. Ms. Bowers explained that ISO 14000 was developed with input from many countries and is meant to be used in all countries. Industry sees ISO 14000 as a way to make more environmental progress at less cost. Ultimately, it is a driving force because banks, other lending institution, insurance companies, suppliers, and customers will demand an ISO certification. But for ISO 14000 to have the greatest impact, regulatory agencies will need to review their approaches with an eye toward increased flexibility. In particular, Ms. Bowers

stressed that regulatory approaches should treat industries that want to comply — i.e. those that certify under ISO 14000 — with more flexibility than those that do not, but that ISO 14000 is not intended to replace regulation.

Ms. Rachel Vasquez, Assistant Director, Environmental Management Bureau, Philippines, focused on the concept of “social acceptability” as a driving force. In the Philippines, environmental laws are sufficient, but there is no great political commitment to implement them so compliance is low. In this situation, the use of public pressure from stakeholders and local government units works well. Using the concept of social acceptability, proponents and opponents alike are engaged in dialogues and public hearings before new regulatory efforts are undertaken and as part of approval of environmental compliance certificates (approval of EIAs) for major projects such as mines, forest harvesting, etc. A companion policy that works well is the use of the public as informal monitors of industrial environmental performance. In the Philippines, NGOs are critical in this regard.

Stan Wajda, Legal Advisor, EC Phare Program, Ministry of Environmental Protection, Poland, addressed privatization as a driving force. The classical notion is that under state-owned and operated industry, little environmental progress is likely, but that in market economies, the private profit incentive can be harnessed to deliver environmental results. This has, indeed, been the case in Poland. For example, Poland has had programs of economic instruments (air emission fees, waste effluent fees, water use fees, waste disposal fees, forestry fees) in place since the 1970s, but they have not been effective until the fall of communism several years ago. Since that time, production subsidies have been eliminated and fees have increased to levels that compel private expenditure on pollution control and minimization. Fines and penalties, about \$200 million per year, go into a national fund which lends up to 50% of project costs to industry.

Lic. Javier Cabrera Bravo, General Director for International Affairs, PROFEPA, Mexico, asserted that commerce is an important driving force in developing nations. A series of political, economic and trade-oriented events have lead Mexico to view the environment and sustainable development as a necessary element of its modernization. Since 1971, when the first Environmental Protection Act was decreed, Mexico has experienced continued strengthening of the legal and institutional framework for environmental protection and the preservation of natural resources. The State has transformed its institutional structures, consolidated functions, strengthened enforcement of environmental laws and also expanded its activities to include emphasis on defining environmental objectives as well punitive intent, and sought to broaden social participation. A new law passing congress will increase access to information, reduce discretionary power of agencies, broaden the opportunities for social input, involving the public in decisions, and decentralize functions from the Federal government to state and local governing bodies. Mr. Bravo stated that the globalization of the world economy and the international nature of trade and political relations forces a developing nation like Mexico to pay much closer attention to the need to comply with global environmental norms and to participate in international forums for exchange of information and agreement on the types of things that developing nations can do to protect the environment.

Dr. Adegoke Adegoroye, Director of Inspectorate and Compliance Monitoring, Federal Environmental Protection Agency, Nigeria, stated that the primary forces driving his country’s environmental compliance and enforcement programs are external. These are the catalytic roles of various initiatives of the United Nations and its agencies over the last eight to ten years and bilateral and multilateral aid from donor agencies. Internally the driving force has been the need to attain public health standards but it is the provision of experts and financial resources from external sources that has made the most headway in promoting environmental programs. There are many challenges that face Nigeria’s enforcement and compliance programs among

which are interagency conflicts and loss of trained staff to other sectors, inadequate legal instruments, the need for public infrastructure and better agency-industry relations, useful economic instruments, and the need for stable leadership.

## 2 DISCUSSION

In regard to ISO 14000, Mr. Bravo pointed out that some countries with a long history of auditing and self-certification programs, such as Mexico, may have to customize ISO 14000 to suit their specific framework. Ms. Vasquez explained that they encouraged industries to certify under ISO 14000 and got commitments only after they went to voluntary options. In Poland, according to Mr. Wajda, the program is mostly unknown but there is much interest. Industry is very anxious to get the certification because it enhances international competitiveness. Thomas Bispham from the United States noted that ISO 14000 could take care of large sources, freeing regulatory programs to target resources on smaller firms. A participant from Germany commented that ISO 14000 certification simply means that an environmental management system is in place, but not that the company is in compliance with applicable environmental standards.

In responding to the issue of social acceptability, Ms. Bowers pointed out the need to get public involvement sooner to avoid having to close companies. Mr. Bravo pointed out the potential for this strategy to fail where populations are largely illiterate, poverty is high, because the public must be educated on the need for environmental protection. In Poland public involvement is limited now, But Mr. Wajda feels it will strengthen with the adoption of European Union policies and framework law that Poland is working on and which is expected to pass within two years. An Argentine participant agreed that public participation is extremely important but getting public participation into gear for a new law is sometimes a great problem.

In a discussion of other driving forces, a participant from Brazil noted that democracy as a force should not be taken for granted. It enables meaningful public participation and unleashes market forces to compel action. A participant from Costa Rica has seen government reform reduce resources for the environment and provide little content in government programs, so clearly government commitment, as evidenced by adequate funding and strong political will is a major driving force. Mr. Bravo noted that NGO's and industry are both against decentralization but for conflicting reasons. NGO's feel that state governments, as opposed to federal governments, will be too soft while industry fears that the states will be too tough. He warns not to decentralize without resources.

## 3 CONCLUSION

Economics and the incentive to be competitive in international markets are a major driving force behind environmental compliance and enforcement programs. The interest in meeting standards, such as European Union policies, NAFTA, and ISO 14000, that can enhance entry into other markets, drives both the regulated and regulating communities, in developed and developing countries.

Public pressure is a driving force which can be used to enhance government programs or to strengthen environmental compliance and enforcement when the government efforts are weak or ineffective, but it requires an educated populous.



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**DRIVING FORCES FOR ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT: SUSTAINABLE DEVELOPMENT, INTERNATIONAL TRADE, PUBLIC PRESSURE AND INVOLVEMENT IN DECISION-MAKING AND THE IMPLICATIONS FOR CLEANER PRODUCTION, ENVIRONMENTAL LAW, AND SUSTAINABLE DEVELOPMENT**

OLEMBO, REUBEN: KEYNOTE ADDRESS

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## **INTRODUCTION**

It is a great pleasure to represent UNEP at this important international conference on environmental compliance and enforcement. Elizabeth Dowdeswell, UNEP's Executive Director, sends you her greetings and best wishes for a successful conference. She personally wanted to give you UNEP's unwavering support in your efforts to develop and perfect the art of environmental compliance and enforcement in your countries. This is often a very difficult task, particularly during a period of intensive global competition, deregulation and government and corporate cutbacks. But this task is also a critical one, and UNEP recognizes that it is you, government policy makers and officials, who are on the front line. You have the ultimate responsibility of seeing that everybody meets at least minimum environmental standards. You also have the very difficult task of finding ways to encourage people to voluntarily go beyond the requirements of environmental laws and regulations.

Today I have the privilege of conveying UNEP's message of encouragement and support, together with several of my colleagues from our regional offices and our Industry and Environment office, who you will be meeting during the UNEP workshops.

## **1 SUSTAINABLE DEVELOPMENT**

You are about to immerse yourself in the multifaceted aspects of the art of compliance and enforcement, benefiting from an international cross-section of experiences and perspectives that is unique to this biannual forum. With such a full and diverse agenda, it may be hard to see the forest for the trees, to have a clear vision of why we are here. So I want to review the driving forces behind environmental compliance and enforcement programs. I say review because these driving forces are not new to you of all people, but they are nonetheless important to keep uppermost in our minds if we are to come out on Friday with a clear sense of vision not only of why we are here, but of the way forward when we get back to our offices.

These driving forces include the inescapable realities facing our planet today as well as the broader influences and trends which affect them.

Ultimately, there is only one driving force. It is of course the inescapable need for environmental protection and sustainable development. In its simplest terms, sustainable development means making sure that development meets the needs of the present without compromising the ability of future generations to meet their own needs. Environmental protection and management are at the heart of sustainable development, along with economic growth

and elimination of poverty. We need to focus on six global environmental priorities if we are to make real progress in moving towards global environmentally sustainable development. These are:

#### 1.1 Atmosphere and climate

The thin skin of air that surrounds the planet is being affected by human activities as never before. Air pollution does not respect boundaries. It affects agriculture and ecosystems far from its source. Many people living in urban areas (45 % of the global population and growing) are exposed to unacceptable levels of air pollution. Forests are still being degraded by acid precipitation caused by air pollutants. Depletion of the ozone layer, causing increasing exposure to the sun's ultraviolet radiation, is an ongoing concern. The link between human activities and global warming is increasingly undeniable, posing mounting threats of climate change, floods and droughts.

#### 1.2 Deforestation and desertification

About 25 billion tons of topsoil are lost each year to erosion; about 15% of the earth's land area has been degraded to some degree. Countries with the least amount of resources in terms of the ability to act or to absorb the societal and economic costs, are often the most affected.

#### 1.3 Fresh water and oceans

Freshwater for human use is a fragile, finite resource. Agricultural, industrial, domestic and municipal needs are stretching hydrological systems to the limit. Overfishing and pollution of oceans are posing severe threats to fish stocks and marine ecosystems, a vital part of the global food supply.

#### 1.4 Toxic chemicals

Some of the more than 50,000 different chemicals produced annually can be toxic or carcinogenic. When toxic substances accumulate in the environment and in food chains, they can profoundly disrupt biological processes. Much more is still unknown than is known about environmental toxification

#### 1.5 Biodiversity

We are experiencing the greatest extinction of species since the dinosaurs disappeared 65 million years ago. This is a result of the combined effects of rapid conversion and degradation of habitat for human use, overharvesting of animals, fish and plants, pollution (accidental and deliberate), introduction of exotic species, global climate change, industry, agriculture, forestry and other activities that destroy or impair natural ecosystems.

#### 1.6 Energy and natural resource consumption

Current global consumption patterns are not only inequitable, but are environmentally unsustainable. Industrialized countries are the largest consumer of energy and currently consume about 3/4 of many of the globe's important resources (e.g. metals, energy, commodities). But developing countries are set to become the largest users of energy in the next century and many also have unsustainable patterns of consumption today. The issues are controversial

and complex, and technology is not a panacea, even if it could, as some say it must, increase resource productivity by a factor of ten over the next ten to thirty years. And market economics, because they fail to internalize environmental costs, have their limits as well.

This is the hard reality which is the ultimate driving force behind the need to build institutional capacity for environmental compliance and enforcement. These environmental priorities were discussed at length at the 1992 Earth Summit, the largest international conference ever held, drawing an unprecedented number of heads of state. Chapter 8 of Agenda 21 specifically encapsulates the need to build compliance and enforcement capacity as an essential element of environmental management. It calls on countries to "develop integrated strategies to maximize compliance with its laws and regulations relating to sustainable development". It specifies the need to develop effective laws, regulations and standards, promote and review compliance, and detect and establish violation priorities. It also calls on countries to undertake effective enforcement, conduct periodic evaluations of the effectiveness of compliance and enforcement programs, and establish mechanisms for appropriate involvement of individuals and groups in the development and enforcement of laws and regulations.

## **2 OTHER DRIVING FORCES**

Then there are some broader driving forces. There are three which I think are the most useful to keep in mind: 1) public demand; 2) industry; and 3) international trade, standards and law. They are all equally important. If they are not acutely felt in your country at the moment, they probably will be in three to five years.

### **2.1 Public demand**

First, public demand, one of the most vocal of societal driving forces. Public awareness of environmental issues is growing. Concerned and motivated individuals, with the kind of support and contacts made so easy by global networks today, can mount sophisticated campaigns to shut down a polluting factory, boycott a company's products, influence financial decisions, call into question a government's credibility or force it to take action. Public demand has stimulated a great deal of positive change in many countries, legitimizing government's authority to institute higher environmental standards, encouraging companies to go beyond them, signaling the alarm in the case of misdemeanors, and providing new markets for those who are first to catch on. As a country's economy develops, so does its people, so does public demand for a better environmental quality of life. There is growing public recognition that environmental management and economic development are flip sides of the same coin.

Public demand is not just a driving force, it is also a resource. The earlier it is used, the less costly it becomes. Involving the public not only in reviewing permit applications and monitoring compliance, but also early in key government decision-making processes will prevent many of the mistakes, misunderstandings and false perceptions of the past or of other countries. The process of public involvement in environmental decision-making and protection will vary from country to country, and may require concerted effort in places not used to consulting or involving the public. But in an increasingly complex world, government can no longer expect to have all the scientific, technological, social and economic expertise required to make sound decisions. The earlier it consults and involves those outside its offices, the better.

## 2.2 Industry

Another driving force for government compliance and enforcement programs is a little more subtle, but one which will have an increasing influence, particularly where public demand may be left wanting. This is none other than industry itself. It is an increasingly competitive and global world for industry. The companies that are going to survive are the ones that understand that cleaner production (that is, good housekeeping, raw material and energy conservation, and substituting toxic chemicals) is not only good for the environment and public image, it makes economic sense. They are the leaders with a good deal of influence in industry associations that represent and promote the industry's interests. A growing number of such industry associations are using voluntary codes of conduct to promote best environmental practice (the UNEP Industry and Environment office is currently producing guidelines on such voluntary industry initiatives). Industry associations have a collective interest in protecting the public image of the industry. One poor performer among them can spoil it for the rest. They rely on effective government compliance and enforcement programs to provide a level playing field and to keep the lowest performers in the industry from undermining public goodwill and using the environment to undercut their competitors. And in a global economy, industry associations are having an increasingly global reach.

## 2.3 International trade

This brings us to our third broad driving force: international trade, standards and law. As we all know, industry interest in a level playing field extends beyond national borders, as does environmental protection. Forgive me for bypassing the complex and sensitive subject of international free trade agreements and the criticism that they settle for the lowest common denominator in the effort to "harmonize" national standards. Too often this discussion devolves into an inconclusive debate on which comes first - the chicken or the egg? I'd rather focus on a more encouraging, emerging aspect of international trade which could bring about a small revolution on how international business conducts its purchasing and supply decisions. This is the setting of environmental management standards by the International Standards Organization which are to come into effect this year. Like all ISO standards, the ISO 14000 standards on environmental management systems, environmental auditing, environmental performance evaluation and others, are voluntary. But a few years ago, the ISO set parameters for measuring total quality - ISO 9000 - and look what happened - you need it if you want to do business outside national borders. Why is this a driving force for government compliance and enforcement programs? Well, if you want your countries' industries to be internationally competitive, you'll need them to be up to speed on environmental management. Many companies are already lining up for ISO 14000 certification.

Voluntary ISO standards will not of course solve many of the global environmental issues that face us today. There will still be a pressing need for legally-binding and global environmental agreements such as the Convention on the Illegal Trade in Endangered Species of Wild Fauna and Flora (CITES), the Montreal Protocol on Substances that Deplete the Ozone Layer, and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and the Convention on Biological Diversity. UNEP provides the secretariat and other support for each of these multilateral agreements but relies on national governments to ensure compliance and enforcement.

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### **3 CLEANER PRODUCTION AND ENVIRONMENTAL LAW**

Environment protection and sustainable development, public demand, industry expectations, and international trade standards and agreements are the key driving forces to keep in mind throughout the week. If I could add just one other thing to keep in mind throughout the exchange of your experiences it is the whole issue of how to use government compliance and enforcement programs to promote a cleaner production approach among the regulated community. In the past, too much effort has been directed at single media enforcement (e.g. clean air, solid or hazardous waste, water treatment) which has too often led to an end-of-pipe reaction by the regulated community, and merely transferred environmental pollutants from one medium to another. Any initiatives that are on the way to promoting cleaner production need to be highlighted in your exchange of ideas.

Helping governments to strengthen their institutional capacity to implement Agenda 21 is a key priority for UNEP. UNEP's Environmental Law Unit provides support to governments in developing the legislative framework needed for their country's environmental protection, and you will be hearing more about the environmental law activities from Lal Kurulkulasuriya from our Regional Office for Asia and the Pacific. UNEP's Industry and Environment office has a twenty year history of working with governments, industry and NGOs in institutional capacity building for industrial compliance, particularly in the areas of cleaner production, accident prevention and emergency preparedness, and environmental technology assessment. Later today, John Skinner, Senior Advisor at UNEP Industry and Environment will be telling you about these activities. And UNEP IE's training manual on "Industrial Environmental Compliance" will be used during the UNEP workshops on Wednesday to set the context for regionally focused discussions.

### **4 CONCLUSION**

To conclude my address, I want to really thank the organizers of this conference. I can imagine the uphill battle it must have been to pull this together, particularly in today's climate of government cutbacks. But the need for international exchanges on environmental compliance and enforcement are essential if we are to move towards a cohesive global society meeting its peoples needs without undermining its ecological basis. UNEP is pleased to be associated with such a commendable effort, and would like to give a warm thanks to our partners in this conference the US EPA, the Dutch Ministry of Housing, Spatial Planning and the Environment, Environmental Law Institute, Environment Canada, the European Commission and our hosts, the Thailand Government.

Thank you.



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## IMPLICATIONS OF ISO 14001 FOR REGULATORY COMPLIANCE

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### 1 INTRODUCTION

The International Standard Organization (ISO) 14000 series of environmental management standards embodies a new approach to environmental protection. In contrast to the prevailing command-and-control model, it challenges each organization to take stock of its environmental aspects, establish its own objectives and targets, commit itself to effective and reliable processes and continual improvement, and bring all employees and managers into a system of shared and enlightened awareness and personal responsibility for the environmental performance of the organization. This new paradigm relies on positive motivation and the desire to do the right thing, rather than on punishment of errors. Over the long term, it promises to establish a solid base for reliable, consistent management of environmental obligations.

Recent industrial accidents, some entailing significant human and environmental harm, have proved that regulatory compliance is not enough to ensure against environmental degradation. As it became clear that compliance was not a complete prescription for environmental protection, an awareness arose that a more proactive system was needed. ISO 14001<sup>1</sup>, the foundation of the entire ISO 14000 series, is such a proactive environmental protection strategy in which regulatory compliance is but one of the elements of a more inclusive and all-encompassing approach.

ISO 14001, the environmental management system (EMS) standard, provides a framework to direct the use of organizational resources to the full breadth of actual and potential environmental impacts through reliable management processes and a base of educated and committed employees. Regulatory compliance is now a normal result of this management strategy, along with awareness, sensitivity, and preparedness, greater reliability and consistency in meeting environmental objectives, and greater confidence in the organization's ability to prevent accidents.

After decades of focusing on compliance with government regulations, however, the regulated and regulating communities will need to engage in some rethinking to look beyond compliance as the measure of an organization's environmental achievement. Compliance will, of course, lose none of its importance in an organization's operations. But it would be shortsighted to view ISO 14001 as merely a tool to achieve compliance, and those who insist on doing so will incur the costs of implementing the EMS without reaping its full benefits. It is imperative, therefore, that everyone involved with ISO 14001 understand its wider purpose and avoid trivializing it by setting its value only with reference to its impact on regulatory compliance. ISO 14001 is a significant and consequential development in our ability to protect and preserve the environmental resources of our planet—transcending the regulatory compliance approach—and must be valued accordingly by both users and regulators.

There should be no illusion that ISO 14001 will be easy to implement. Even organizations with sophisticated environmental programs will find ISO 14001 challenging. The organization must inventory and then assess all environmental aspects of its operations, products, and services. Regulations may apply to many of these, but they are not likely to apply to all. The standard calls for a system that produces reliable and effective management. While

regulations call for compliance, they generally do not include requirements for management systems. ISO 14001 expects all employees to be trained and competent in handling the environmental consequences of their work. This requires the infusion of environmental awareness and attitudes in all workers. Broadly, the result over time is a shift in culture to one that is as sensitive to the environment as to production schedules and product design. Few regulations require such far-reaching changes in the mental attitudes of all employees.

It is also true, however, that the diffusion of environmental responsibility from the environmental engineering function to all employees in the enterprise will be the biggest challenge and one that, in the short term, may carry some risk of administrative noncompliance, as employees learn documentation and other record keeping tasks. But, since the goal is to broaden the organizational base of environmental responsibility, we must be willing to accept the possibility of these types of errors during the early phases of implementation. Thus, it needs to be understood that conformance is ISO 14001 is not likely to result in an immediate change in the organization's compliance posture.

## **2 AWARENESS OF APPLICABLE LAWS AND REGULATIONS**

ISO 14001 requires an organization to be aware of all environmental laws and regulations applicable to its environmental aspects. This requirement will compensate, to a considerable extent, for the ignorance that prevails in places where such laws are not enforced. Today, many organizations throughout the world have only a vague notion of the laws they are subject to. ISO 14001 may also lead some countries to discover that they have many more laws on their books than they can ever enforce, given their resources. Whereas in past years developing countries were encouraged to adopt environmental laws from more-developed countries, compliance and enforcement may have become challenges that strain both the societal commitment and the institutional capacity for proper execution.

In other instances, a country may have adequate regulatory mechanisms but not the resource infrastructure for effective implementation. This is a structural problem that cannot be addressed through a management standard alone. However, awareness of applicable laws is the first step in the right direction, and it may, through its own compelling dynamic, spur evolutionary changes in behavior, technological investment, and institutional will to build the necessary infrastructure.

## **3 PROMOTION OF PROCESS TO MAINTAIN REGULATORY COMPLIANCE**

ISO 14001 is expected to promote the development of processes to maintain environmental compliance. While compliance with all applicable laws may be difficult or elusive in many countries, ISO 14001 expects organizations to implement processes to maintain such compliance. In countries where enforcement is strict, compliance processes are a part of doing business and can simply be integrated into the overall management system. In countries where enforcement is either lacking or ineffectual, ISO 14001 will provide the needed (and in some cases the only) impetus to develop processes to reach and maintain compliance. In effect, the standard encourages compliance processes, even in countries where compliance and enforcement have not traditionally been strong. Of course, knowledge of the applicable laws is a prerequisite for establishing any compliance process.

In some developing countries, compliance options will be limited by deficiencies in both organizational resources and available infrastructure. As noted above, infrastructure plays a key role in compliance, since it is very difficult to be in regulatory compliance without the necessary infrastructure. For instance, if there are no recycling facilities in an area, the law that requires recycling is difficult, if not impossible, to comply with. In these cases, organizations may be disadvantaged in meeting the requirements of ISO 14001, since their implementation of credible compliance processes may require greater efforts to overcome structural national deficiencies. If there are no reasonable ways to be in compliance with specific country laws, an organization will not be able to implement a compliance process to meet those laws.

Conceivably, this situation may provide impetus for some countries to redraft their environmental laws so that they match their existing resources and capabilities. Although redrafting laws to match resources and capabilities may weaken the legal framework in the short term, the overall effect is to increase the ability of organizations to comply with legal requirements. As the infrastructure of a country improves, laws can be made progressively strict. The overall effect is to increase the credibility of all parties involved with environmental progress, including legislators, organizations, and enforcement authorities.

On the other hand, countries with an economy that is strong enough to provide an environmental infrastructure should opt to build this infrastructure to match the requirements of their existing laws. Such a step could improve environmental performance immediately, and is obviously preferable to weakening existing laws.

It must be remembered that under ISO 14001, no proof of actual compliance is actually required for an organization to obtain registration. ISO 14001 requires only evidence of working processes that are designed to maintain compliance. It is certainly a great desire and expectation that, over time, efforts to implement such processes will lead to more consistent compliance and more supportive infrastructures where they are needed.

#### **4 REGULATORY AND LEGAL IMPLICATIONS IN THE UNITED STATES**

There is growing interest in the United States about using ISO 14001 for regulatory compliance and enforcement programs. While the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Justice (DOJ) have not taken official positions on its use, there is some interest from both government bodies, and agency representatives have held preliminary discussions with leaders of the U.S. Technical Advisory Group (TAG).

Official positions from these authorities are not expected before the standards are finalized and judged to be successful. To a significant extent, that success will depend on the integrity and reliability of the third-party conformity assessment system. Government authorities will want some evidence or justification for placing their reliance on ISO 14001 registration. Such evidence must cover the accreditation and registration processes, including the rigor of third-party assessment, the independence of auditors, and the use of appropriate professional safeguards similar to those used in financial audits.

Regulators in the United States will have to consider many factors as they decide how to weave ISO 14001 into compliance programs. An organization that has been registered to ISO 14001 will have demonstrated its good-faith, voluntary efforts to better manage its environmental responsibilities and maintain compliance with applicable laws and regulations. In addition, a certified organization will have taken steps to inculcate a sense of responsibility and an environmentally conscious culture in its employees. Presumably, such an organization merits consideration from the regulators and deserves credit for its efforts. Credit could come

in the form of expedited permitting, less frequent agency audits, or other means. These incentives would motivate organizations to establish an effective EMS, with the goal of continual improvement of the system, and then to become registered to ISO 14001.

Regulators are also likely to consider registration in their exercise of prosecutorial and sentencing discretion. Both the Environmental Protection Agency and the Department of Justice use guidelines to weigh evidence of environmental management systems for these purposes. It is reasonable to expect that ISO 14001 may become the model used, particularly since it covers a wider number of management elements than the Department of Justice guidelines and, most important, encourages third-party audits for certification. It is important, however, that regulators not use the absence of ISO 14001 as a penalty against an organization. Since ISO 14001 is a voluntary standard, the only appropriate approach is to reward those who use it, not to punish those who do not. Care must also be taken not to depreciate the significance of ISO 14001 by giving it an insignificant role in voluntary or regulatory schemes. ISO 14001 transcends the limited achievements of regulatory compliance and should be justly valued and accorded the recognition it deserves.

Further, it can be expected that some courts of law will use ISO 14001 as a measure of standard commercial practice or reasonable care. Showing conformance to the elements of ISO 14001 could be very advantageous in civil and criminal liability suits. Indeed, evidence of registration to ISO 14001 is likely to have standing in a court of law, and could be used as a test to determine if an organization is practicing sound environmental management. Again, the difficulty here is to avoid punishing those who have not implemented ISO 14001. Punishment is certainly not the intent, and we should remain watchful to make sure the standard is not used in that way.

## **5 EQUALIZING OF INTERNATIONAL REGULATIONS**

Over time, ISO 14001 will be a force of equalization of environmental regulations between countries. Although this may take many years to accomplish, the author believes that implementation of ISO 14001 will ultimately pressure countries to harmonize their environmental laws.

As organizations around the world begin developing and implementing EMS programs that conform to ISO 14001, their abilities to undertake more sophisticated environmental protection strategies will increase. Just as the implementation of individual elements of ISO 14001 increases an organization's overall environmental awareness and, consequently, its environmental care, so it follows that as an EMS continues to improve, the protection capacity of the organization will be enhanced. As this happens with more and more organizations, government leaders may actually see less resistance to reasonable and cost-effective environmental protection measures. Thus, as ISO 14001 helps organizations become more sophisticated in environmental protection, it lays the groundwork for governments to create legislation that is more protective of the environment.

In addition, once ISO 14001 is implemented, compliance to national laws will be improved, since it is a requirement in the EMS standard for an organization to have knowledge of and to follow existing country laws. As regulators find that compliance is increasing, there will be greater impetus to continue the evolution and reformation of their country's environmental laws.

An international accreditation and registration system will also serve to spotlight the relative status of national capabilities, including legal frameworks and enforcement programs. Over time, ISO 14001 registrars will increase their expertise in comparing environmental requirements around the world. As ISO 14001 proliferates, the strengths and weaknesses of national regulatory schemes will become apparent. It is reasonable to assume that certain countries will feel compelled to bring their regulations to a higher level. In particular, countries that have the technical infrastructure for managing pollution and waste (e.g., hazardous waste management units, recycling facilities, and abatement control systems) will come under subtle pressure to upgrade their legal structures.

## **6 CONCLUSION**

Certainly, no one in the regulated community wants ISO 14001 to become an engine for more regulation around the world. To the contrary, the desire is to promote voluntary management systems which have benefits far in excess of those derived from mere compliance with regulations and which, over time, can supplant the command-and-control model. This is the ultimate aspiration. In the interim, however, the management standards will coexist with country laws and regulations which, for now, are still the major incentive for many organizations.

## **REFERENCE**

1. ISO 14000 is the International Standards Organization's final draft Voluntary Standard for Environmental Management Systems.



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## **THE IMPACT OF DRIVING FORCES ON ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT PROGRAMS — THE PHILIPPINE EXPERIENCE**

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### **1 INTRODUCTION**

The Philippines is known to have more than enough environmental regulations but only lacks the resources and "political will" to implement them. These have been shown by the data gathered on the number of Environmental Compliance Certificates issued and the number of Cease and Desist Orders served and executed.

There are about 11,000 manufacturing firms in the country. About 50% of the industries are located in Metro Manila. The main manufacturing industries are textiles, pulp and paper, sugar, alcohol and distilleries, desiccated coconut, food manufacturing, plastics and consumer goods, whose processing cause the most pressing pollution and solid waste problems. The major urban centers, other than the National Capital Region, are also beset with slum proliferation with the accompanying pollution and solid waste problems arising from inadequate infrastructure systems unable to cope with rapidly growing populations. In Metro Manila, for example, a commissioned study showed that 38% of river pollution loads come from industrial sources, 40% from domestic liquid wastes and 22% from uncollected solid waste and reaching waterways during rain periods. Metro Manila also has set up a solid waste management system to handle the domestic solid waste generated throughout the National Capital Region. Similarly in other urban centers, such as Cebu, Davao, Baguio, Cagayan de Oro City, local governments have provided some form of solid waste collection and disposal systems. But in rural areas, there are hardly any systematic approaches to the solid waste management problem.

Thus, the major environmental problems include treatment and disposal of wastewater (both domestic and industrial), solid waste (domestic and industrial), and hazardous waste. We have only two sanitary landfills, which accommodate both domestic and hazardous waste.

### **2 DRIVING FORCES**

#### **2.1 Environmental laws**

The concept of environmental protection is promised under one basic law which is Presidential Decree No. 1151, known as the Philippine Environmental Policy, which declared a continuing policy of the state (a) to create, develop, maintain and improve conditions under which man and nature can thrive in productive and enjoyable harmony with each other; (b) to fulfill the social, economical and other requirements of present and future generations of Filipinos; and (c) to ensure the attainment of an Environmental quality that is conducive to life of dignity and well-being.

A major piece of legislation concerning the environment is Presidential Decree 1586. This law established the Environmental Impact Statement system which requires all agencies and instrumentalities of the national government, including government-owned or controlled

corporations, as well as private corporations, firms and entities to prepare, file and include in every action, project or undertaking which significantly affects the quality of the environment the following:

- The environmental impact of the proposed action, project or undertaking including any adverse environmental effect which cannot be avoided should the proposal be implemented.
- The mitigating measures to minimize adverse environmental effects.
- Alternatives to the proposed action.
- A determination that the short-term uses of the resources of the government are consistent with the maintenance and enhancement of the long-term productivity of the same.
- Whenever a proposal involves the use of depletable or nonrenewable resources, a study must be indicated that such use and commitment are warranted.

In short, the proponent of any project which is a potential source of environmental pollution/degradation is required to secure an Environmental Compliance Certificate from the Department of Environment and Natural Resources/Environmental Management Bureau by submitting an Environmental Impact Statement. This law provides sanctions for noncompliance with the Environmental Impact Assessment requirement.

The enactment of another environmental law, Republic Act 6969 (Toxic substances, Hazardous and Nuclear Waste Control Act of 1990) further mandated the Department of Environment and Natural Resources to regulate hazardous and nuclear wastes as well as toxic substances in the Philippines.

Republic Act 6969 declared it a policy of the state to regulate, restrict or prohibit the importation, manufacture, processing, sale, distribution, use and disposal of chemical substances and mixtures that present unreasonable risk and/or injury to health or the environment; to prohibit the entry, even in transit, of hazardous and nuclear waste and their disposal into Philippine territorial limits for whatever purpose; and to provide advancement and facilities research and studies on toxic chemicals and hazardous and nuclear wastes.

The system's scope was also delimited to "environmentally critical projects or projects to be located in environmentally critical areas" (identified in Presidential Proclamation No. 2146). Presidential Decree 1586, however, became operational only in 1982.

Prior to this, the system underwent transition from a decentralized process to a centralized one, starting December 23, 1979 by virtue of a National Environmental Protection Council Special Memorandum. The National Environmental Protection Council was the agency responsible for implementing Presidential Decree 1586. From the lead agencies, processing of Environmental Impact Statement documents and issuance of Environmental Compliance Certificates for projects which have satisfactorily complied with the Environmental Impact Assessment requirement, was centralized in the National Environmental Protection Council.

For the past decade, government exerted efforts to implement provisions of Presidential Decree No. 1152 or the Philippine Environment Code. Such efforts were on concerns like waste management, air and water quality management, environmental education, environmental research and tax incentives, among others. While these efforts were limited they, nevertheless, laid down the groundwork for subsequent environmental management undertakings in the nineties.

Republic Act 3931 was subsequently amended in 1976 by Presidential Decree 984 which abolished National Water and Air Pollution Control Commission and created, in its stead, the National Pollution Control Commission. The National Pollution Control Commission was vested with greater powers, among which are as follows:

- The power to impose an ex-parte Cease and Desist Order on two grounds:
  - a) when there is immediate threat to life, public health, safety or welfare, or to animal or plant life; or b) when the wastes or discharge exceeds the allowable standards set by the Commission.
- The expressed power to order closure of a firm for nonpayment of fines.
- The decision of the National Pollution Control Commission is considered final and may be appealed only to the Court of Appeals on questions both of facts and law, or to the Supreme Court on questions of law.

At present, House Bill No. 4 which is "an Act to Revise the Philippine Environmental Code, defining its scope and integrating all other laws relative thereto" is being deliberated in both Senate and the House of Representatives of Congress. This act will be referred to as the "Revised Philippine Environment Code of 1996" the salient features of which are the following:

The major legislation governing pollution control is Republic Act No. 3931 which created the National Pollution Control Commission. The law declared it a national agricultural, industrial, etc., utilization. This mandate provided for the establishment of reasonable standards for air, water and noise. Presidential Decree 984 was then amended by Executive Order No. 192 merging the National Pollution Control Commission, National Environmental Protection Council and Environmental Center of the Philippines into the Environmental Management Bureau and placing this Bureau under the Department of Environment and Natural Resources. The Pollution Adjudication Board was likewise created under the Office of the Department of Environment and Natural Resources Secretary.

## 2.2 Permits and licenses issued by Department of Natural Resources regional offices

### 2.2.1 Environmental compliance certificate

Permitting is the most fundamental regulatory element within any command-and-control system. It controls the discharges from pollution sources. As a matter of practice in the Philippines, it is routine to include the permitted discharge limits in the Environmental Compliance Certificate that is pursuant to the Environmental Impact Assessment process. Thus instead of using the Environmental Impact Statement System as a planning tool, this has become a regulatory tool. This practice may result from the permit language of Presidential Decree 984 itself where emphasis is usually placed on the "permit to construct" or the "permit to operate", as distinguished from the "discharges" from the facility. These practices encourage enforcement of the permit through both the Environmental Compliance Certificate as well as Presidential Decree 984. This is an inefficient process that tends to put the Environmental Impact Assessment process at the center of all environmental management in the Philippines. While this may be appropriate at the front end of the development process in the Philippines, it will be wastefully duplicative of resources as the national development program matures.

Permit management functions ordinarily include the establishment of discharge limits pursuant to a standard, and monitoring the permit holder's compliance therewith. These functions are presently performed by the Department of Environment and Natural Resources regional

offices for those industries that fall outside the Environmental Impact Statement prescriptive list of ECPs and (theoretically) for those industries that pre-existed the Environmental Impact Statement system (before 1982).

### 2.2.2 Permit to operate and authority to construct

The regulatory power exercised by the Department of Environment and Natural Resources Regional Offices, particularly the Environmental Management and Protected Areas Sector, consists of the power to issue permits as stated in 2nd paragraph, Sec. 8, Presidential Decree 984, to wit:

*“No person shall perform any of the following activities without first securing a permit from the Commission for the discharge of all industrial wastes and other wastes which could cause pollution: 1) the construction, installation, modification or operation of any sewerage works or any extension or addition thereto; 2) increase in volume or strength of any wastes in excess of the permissive discharge specified under any existing permit; and, 3) the construction, installation or operation of any industrial or commercial establishment or any extension or modification thereof or addition thereto, the operation of which would cause an increase in the discharge of wastes directly into the water, air and/or land resources of the Philippines or would otherwise alter their physical, chemical or biological properties in any manner not already lawfully authorized.”*

In practice, the Regional Offices issue two kinds of permits. One is the Authority to Construct, which is issued once before the construction of the antipollution device and after the plans and specifications are approved. The other is the Permit to Operate which is issued yearly to authorize the continued use of the air and water pollution control device and air pollution source. Water pollution sources are not subject to annual re-issuance of the Permit to Operate. The annual permit review and re-issuance of Permit to Operate is not mandated by Presidential Decree 984, thus, permit life is a matter of internal guidance by the Department of Environment and Natural Resources.

There are 3 requirements for the issuance of the Permit to Operate:

- Prior issuance of the Authority to Construct.
- Inspection which shows that the conditions imposed in the Authority to Construct are complied with (i.e., the antipollution device is properly maintained and still sufficient).
- The antipollution device passed the test for efficiency.

Should any of the requirements be absent, a temporary permit, which is effective only for six (6) months, may be issued. Usually, the failure to complete the requirement is caused by the inability of the Regional Office to conduct the necessary inspection or test because of lack of transportation, budget for travel, testing equipment, laboratory, and trained personnel.

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## 2.3 Monitoring, compliance and enforcement

### 2.3.1 Environmental compliance certificate conditionalities

For development projects, compliance to the conditionalities set forth in the Environmental Compliance Certificates is being monitored by the Environmental Management Bureau and the Department of Environment and Natural Resources Regional Offices.

### 2.3.2 Environmental quality standards

Compliance to the standards on air and water quality set forth in the Implementing Rules and Regulations of Presidential Decree 984 is being monitored by the Department of Environment and Natural Resources Regional Offices. This is usually done once a year prior to the issuance of the annual Permit to Operate.

### 2.3.3 Republic Act 6969

Compliance to the requirements set forth in the guidelines of the Republic Act is being monitored by the Environmental Management Bureau.

Monitoring as to compliance to the conditionalities of the Environmental Compliance Certificates and to the air and water quality standards is very ineffective.

## 3 IMPACTS OF DRIVING FORCES

### 3.1 Environmental laws

#### 3.1.1 The Philippine environmental policy and the Philippine environment code

Unfortunately these twin laws failed to truly integrate environmental quality protection and natural resources management with the result that policy conflicts between these two fields often arise. While comprehensive statutory policies were enunciated in Presidential Decree 1151 and 1152, specific legal rights, for which specific remedies in law can be invoked, were not provided. Further legislation was necessary to translate these policies into substantive, actionable rights and provide specific environment for governance. Nevertheless, these laws provide an excellent frame of reference upon which subsequent environmental laws can be analyzed. Presidential Decree 1152, in particular, is considered the touchstone to determine the comprehensives of other enabling legislation and administrative promulgations.

#### 3.1.2 Environmental impact statement

The number of Environmental Impact Documents submitted and processed from June 1978 to December 1979, is quite difficult due to the decentralized nature of the Environmental Impact Statement system then and the erratic reporting procedure of the lead agencies. December, 1979 to December 1980 was still a transition period during which some agencies were still processing Environmental Impact Statement documents although the authority to process and review such was already lodged with the National Environmental Protection Council.

From January 1981 to December 1989, a total of 5,231 environmental impact documents were submitted to the implementing agency. Of these, 4,366 or 83% constituted sand and gravel projects, which were reviewed based on the cumulative impact and existing guidelines on sand and gravel extraction drawn up by the National Environmental Protection

Council and the Bureau of Mines and Geosciences (BMG). Table 4 provides the number of environmental impact documents processed from 1981-1989, excluding sand and gravel projects. Of the 865 Environmental Impact Documents, 840 were issued Environmental Compliance Certificates. A breakdown of Environmental Impact Documents submitted to the Environmental Management Bureau by project type for the same period is given in Table 5. Nonmetallic mining had the highest number of applications, followed by subdivision and metallic mining. From 1990 to 1995, there were 1349 Environmental Compliance Certificates issued by the Environmental Management Bureau.

### 3.1.3 Presidential Decree No. 984

Despite the creation of a powerful body, the National Pollution Control Commission failed to make a dent on the pollution control efforts of the government. This is partly due to the fact that it was not provided with the financial and personnel resources necessary to carry out its mandate. Moreover, an interview with a former National Pollution Control Commission official has revealed that the industries were then very supportive of the Marcos government, and in turn, whatever Cease and Desist Orders or closure orders the National Pollution Control Commission may have planned to issue had to be "cleared with "Malacañang," which gives the industries "very strong support". Evidently, the National Pollution Control Commission did not have the political backing of the President, from whom all powers of the government at that time, including legislative and judicial, emanated.

The Pollution Adjudication Board assumed the powers and functions of the Commissioners of the National Pollution Control Commission with respect to the adjudication of pollution cases under Republic Act No. 3932 and Presidential Decree No. 984. As of 1989, a total of the 160 cases were filed with the body. Of these, it had deliberated on 57 cases. Fourteen (14) respondents were fined while twenty-three (23) had their Cease and Desist Orders temporarily lifted.

This power to issue permits is generally perceived by the field officers to be a useful regulatory tool. Some of the observations/recommendations on the existing permitting requirements are:

- The requirement for annual renewal ensures that the Regional office staffs don't lose contact with the industrial establishment even when these lack in the necessary logistics to conduct regular inspections. Industries come to the Department of Environment and Natural Resources with the information required of them. This is especially useful in monitoring the activities of small and medium-scale industries which the Department of Environment and Natural Resources usually see only once a year during the period for renewals of the Permit to Operate. At present, the Department of Environment and Natural Resources has issued more temporary permits, with six month effectivity, than regular permits. The constraint is on the Department of Environment and Natural Resource's part, on their inability to conduct timely inspection and testing.
- There is the need to study whether the Permit to Operate should be renewed on a yearly basis. This function makes the Department of Environment and Natural Resources mainly an industry-regulating office when resources should be devoted rather to initiating, supporting, and implementing environmental protection programs. It is also consuming too much of the industry's time and effort when the burden of monitoring should be on the

Department of Environment and Natural Resources. It is better to simply require the industry to install a self-monitoring device and to regularly submit reports together with the result of the indicators in their analyzer or monitoring equipment. The Regional Office can then just perform spot-checking instead of inspecting all the industrial plants in the region yearly.

- The Regional Office devotes most of its time conducting routine inspections related to issuance of permits. Authority to Construct is a meaningful regulatory mechanism because the Department of Environment and Natural Resources can already put in place, at the construction phase, the company's pollution control scheme. The Department of Environment and Natural Resources gets the chance to examine the plans and specifications for the antipollution device to determine its sufficiency and appropriateness.
- One weakness in the Department of Environment and Natural Resources' permitting regulation is the lack of power of the Regional Office to stop the industry from constructing and operating the antipollution device or undertaking activities that cause pollution. The Department of Environment and Natural Resources should have this power. Right now, the Department of Environment and Natural Resources can only impose a "compromise penalty" of P1,000.00 (US \$26,192) pursuant to an National Pollution Control Commission Memorandum, Series of 1986 in case of failure to secure Authority to Construct.

A perusal of Presidential Decree 984 will readily show that the present practice does not satisfy the mandate of the law. The permitting regulation practice at present is confined to the proper construction and maintenance of the pollution control device. In contrast, the law authorizes the licensing of increases in volume or strength of any wastes discharged and the construction, installation or operation of any industrial or commercial establishments which would cause an increase in the discharge of wastes. This means permitting regulations should cover the volume and concentration of discharges (the implication being some limitation on cumulative effects), and the construction/installation of all pollution sources, not just those affecting air. Thus, in this instance, regulatory practice needs to catch up to the breadth of the statutory mandate. In addition, further thought should be given to increasing permit life to, say, five years and then concentrating on compliance monitoring with regular reports on emissions sent to the Regions by industry.

#### 3.1.4 Republic Act 6969

Implementation of this law only involves the issuance of importation clearances for importation of toxic chemicals and recyclable materials. Implementing guidelines have just been drafted and we are starting the implementation now.

### 3.2 Social acceptability/public participation

The continuing development and refinement of the Environmental Impact Assessment process brought into focus public participation and social acceptability concerns in environmental assessment and monitoring. Several major projects were shelved due to non-issuance of Environmental Compliance Certificates because of public opposition.

The Department of Environment and Natural Resources Administrative Order No. 21, Series of 1992 (DAO 21, s. 1992) reflects this new perspective not only to provide the mechanism for Environmental Impact Assessment monitoring but to recognize the importance of public participation in development activities. Public participation should start right in the scoping phase, in the conduct of the Environmental Impact Assessment and until the conduct of the public hearing.

### 3.3 Philippine Council on Sustainable Development

The Philippine Council on Sustainable Development is a post-United Nations Conference for Environment and Development national council established by President Fidel V. Ramos through Executive Order No. 15 dated September 1, 1992. The primary task of the Philippine Council on Sustainable Development is embodied, in broad terms, from the following words of President Ramos:

*"To ensure that the commitments made at Rio de Janeiro, and the implications of the Earth Summit to the Philippines are implemented, periodically monitored and coordinated at the global level..."* (Speech delivered during the conference entitled: The Philippine Agenda 21: Reaffirming our Commitments to the Earth Summit, September 1992)

The Philippine Council on Sustainable Development has the following mandates:

- Review and ensure the implementation of the Philippine commitments to sustainable development principles made at the United Nations Conference for Environment and Development.
- Establish guidelines and mechanisms to concretize and operationalize the sustainable development principles embodied in the Rio Declaration, United Nations Conference for Environment and Development, National Conservation Strategy, and the Philippine Agenda 21, and incorporate them in the preparation of the Medium Term Philippine Development Plan at both the national and local levels.
- Provide directions in the form of policy reforms, program and new legislations to address continuing and emergent issues and to chart future actions related to environment and development.
- Act as a coordinating mechanism, in cooperation with the Department of Foreign Affairs — Office of the United Nations and other International Organizations, the United Nations Commission on Sustainable Development and other international organizations, on the provision of assistance and cooperation towards the fulfillment of Philippine commitments to the United Nations Conference for Environment and Development.
- Formally adopt a Philippine Agenda 21 and develop national sustainability plans.

The Council is reportedly the first body in Asia to be established in connection with the creation of the United Nations Commission on Sustainable Development to monitor and report on the level of compliance of countries to commitments made in Rio. As the national mechanism for monitoring implementation of Philippine commitments made in Rio, the Council will report to the United Nations Commission on Sustainable Development in this regard.

The Council is expected to take an active role in advocating for the effective implementation on new environmental policies adopted under the current administration.

It is one of the few government bodies that has adopted the principles of counterparting and consensus-building in its structure. This distinction is highlighted in the following words of President Ramos:

*"The Council has also reminded us how fruitful it is for both government and the private sector to join hands. The Council has given new meaning to the concept of counterparting—the government secretariat works harmoniously with its counterpart Non-Government Organizations/Private Organizations secretariat. This is a work technique worth emulating in the other endeavors of government."*

### 3.4 Philippine strategy for sustainable development

Government took cognizance of the need for a National Conservation Strategy specifically through Section 16 (h) of Executive Order No. 192. Pursuant to this mandate, the Environmental Management Bureau initiated a series of consultations with the different sectors of society. On May 23-24, 1988, the Environmental Management Bureau convened a multi-sectorial national workshop, the participants of which issued a formal resolution urging the President and Congress of the Republic of the Philippines to adopt and implement a Philippine Strategy for Sustainable Development. The Workshop also generated the first draft of a conceptual framework for the Philippine Strategy For Sustainable Development. Subsequent consultations, such as the Symposium held on June 6, 1988, the Senior Officials' Consultative Forum on February 17, 1989, and regional multi-sectorial consultations, served to further crystallize and refine the framework. In its Resolution No. 37, dated November 29, 1989, the Cabinet approved the Conceptual Framework of the Philippine Strategy for Sustainable Development.

The Philippine Strategy For Sustainable Development is basically the country's response to the worldwide call for undertaking development without destruction and "meeting the needs of the citizens of today without limiting the options of future generations to fulfill their needs". Specifically, "it aims to achieve and maintain economic growth without depleting the stock of natural resources and degrading environmental quality."

At its core are ten major strategies aimed at resolving and reconciling the diverse and sometimes conflicting environmental, demographic, economic and natural resources use issues. These strategies are:

#### 3.4.1 Integration of environmental consideration in decision-making

This will involve a fundamental realignment of development planning objectives to enable the merger of environmental and economic considerations in decision-making. Analytical tools and methodologies such as natural resource accounting, environmental impact assessment and land use planning will be utilized.

#### 3.4.2 Proper pricing of natural resources

A price reform strategy will be employed which will take into consideration pricing of environmental resources which have heretofore been considered free (air and water); proper pricing of grossly underpriced resources such as timber and minerals; and payment for damages to the environment, among others.

#### 3.4.3 Property rights reform

At the heart of the strategy is security of tenure for small-holder farmers and forest occupants over primary resources. This is envisioned to result in self-regulation by the concerned community or individual in the exploitation of natural resources. The Strategy would involve utilization of such instruments and schemes as stewardship contracts, small holder timber concessions, artificial reef licenses, community forests, community fishing grounds and mining cooperatives.

#### 3.4.4 Conservation of biodiversity

This is simply an explicit recognition of the importance of preserving the country's wild species and genetic diversity through the establishment of protected areas. It is seen as a means to increase the country's capacity to deal with future questions on survival and development.

#### 3.4.5 Rehabilitation of degraded ecosystems

Deliberate rehabilitation efforts are deemed necessary in view of the massive destruction of the country's ecosystems. A concerted action is planned involving massive reforestation of denuded watersheds, mangrove re-plantation, cleanup and control of pollution and revival of biologically dead rivers.

#### 3.4.6 Strengthening of residuals management

The Strategy, rather than merely concentrating on "end-of-pipe" control systems, will be primarily concerned with the introduction of recent innovations in industrial process design aimed at reducing waste streams. It will also entail resource recovery through recycling and utilization of economic incentives to encourage installation of pollution control facilities by industry.

#### 3.4.7 Control of population growth and human resources development

The planned population control program will not only be limited to controlling numbers but will include health, education and rural development projects which will be implemented at the regional and community levels.

#### 3.4.8 Inducing growth in the rural areas

Premised on the notion that economic recovery and long-term stability depend on increasing incomes and employment in the rural areas where the majority of the country's population reside, the seven-pronged strategy will basically involve: a) empowerment of the rural poor through participation in policy-making and project implementation; b) accelerated implementation of land reform; c) grant of equitable access to the rural poor to natural resource use and benefits; d) removal of economic and public investment biases against the rural sector; e) provision of infrastructure and support services; f) establishment and reinforcement of "growth centers"; and, g) strengthening of social services such as education, health and nutrition.

### 3.4.9 Promotion of environmental education

Environmentaleducation is envisionedto enable citizens to understand and appreciate the complex nature of the environment and its role in economic development, as well as, to develop social values which will create the commitment and political will to deal with difficult environmental and social issues.

### 3.4.10 Strengthening of citizen participation

Nongovernmental organizations will be employed to mobilize the citizenry and make them active participants to environmental management. The specific strategy to be employed is the formation of a network among nongovernment organizations and government organizations, to organize communities, conduct public information campaigns, conduct research/situationassessments, undertake environmentalsurveillance and monitoring and other similar activities.

### 3.5 Waste minimization

Instead of attacking pollution problems by the traditional "end-of-pipe" approach, pollution reduction or waste minimization have been the government's main thrust. One of the government's programs, the Industrial Environmental Management Project conducted Pollution Management Appraisals for industries. This resulted in the production of success stories showing company's savings in water power, raw materials, etc.

### 3.6 Monitoring and enforcement

Routine monitoring for Environmental Compliance Certificate compliance is a mandated function of Environmental Management Bureau and Department of Environment and Natural Resources Regional Offices. The same mandate allows these agencies to initiate participatory monitoring, which will be determined by project type, scale and impact. The main difference between these two forms of monitoring is that participatory monitoring involves in the introduction of multidisciplinary and multisectorial group representing various interests but working toward a common objective.

In participatory monitoring, stakeholders and interest groups collaborate in gathering, processing and evaluation environmental information.

Participatory monitoring is primarily aimed at determining whether the project proponent is complying with the terms and conditions of the Environmental Compliance Certificates. At the same time, participatory monitoring is directed towards establishing the actual environmental impacts of the project. And upon comparison with the predicted impacts reported, it provides a quality measure indicating areas for improvement of the Environmental Impact Assessment conducted for similar projects or areas.

### 3.7 Devolution of functions to local government units

Several environmental functions have been devolved to the local government units including the issuance of Environmental Compliance Certificates for Kalakalan 20 projects and sand and gravel and the execution of Cease and Desist Order.

### 3.8 Incentives

Considered by industry to be one of the more positive programs of government, the Tax Incentives Program authorized under Section 56 of the Code, granted the exemptions, credits or deductions for the procurement, installation, utilization and manufacture of pollution control equipment, devices, spare parts and accessories. Incentives ranged from fifty percent to tariff duties and compensating tax to fifty percent of expenses actually incurred of research projects undertaken to develop technologies for manufacture of pollution control equipment. The Program was administered by the National Environmental Protection Council in 1980 but was terminated in 1985 when the prescription period for the incentives lapsed. Efforts were made to extend the effect of the incentives but the legislative branch of government has not come up with the laws of this effect. Only a little more than twenty (20) industrial firms were able to avail themselves of tax incentives under the program. Among these were San Miguel Corporation, Kimberly Clark Philippines, La Tondena, Inc., Franklin Baker Corporation, etc.

## 4 CONCLUSIONS

Thus, the government has initiated the following programs to address these impacts:

- A study on the possibility of issuing Authority to Construct and Permit to Operate instead of an annual basis to a duration of three or five years.
- Continuous monitoring devices are being required to industries and submission of data/reports to the Department of Environment and Natural Resources on a regular (quarterly) basis.
- Work-out with the Department of Trade and Industry to provide incentives to industries setting up these pollution control devices and waste treatment facilities.
- A shift towards market-based instruments (pollution charge) combining with the traditional command and control.
- Strict enforcement of all environmental laws.
- Cooperating with nongovernment organization and private sector in the compliance monitoring program.

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## **THE IMPACT OF DRIVING FORCES ON ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT PROGRAMS - EXAMPLE OF POLAND**

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### **1 INTRODUCTION**

The political changes which occurred in 1989 set Poland on its transition to parliamentary democracy and a market-based economy. Since that time Poland has substantially transformed its economic system. Central planning has largely been replaced by market-oriented system. The private sector has expanded rapidly. In 1992 Poland returned to economic growth and in 1995 its Gross Domestic Product has increased by nearly 7 percent. Now, annual expenditures on environmental Protection in Poland amount to about 1.3 per cent of Gross National Product (or roughly 1 billion USD a year), which is comparable to the percentage spent in the Organization for Economic Cooperation and Development (OECD) countries. Some 95 percent of the expenditures originates from domestic sources.

### **2 NATIONAL ENVIRONMENTAL POLICY**

Protection of the environment was high on the agenda of the round-table negotiations held in 1989 which preceded the political changes. The negotiations and the political changes that followed shortly allowed the development in 1991 of the National Environmental Policy (NEP) which until now is the basic document in the field of environmental policy of the country. It is broadly based on the principle of sustainable development and identifies the following main priority tasks:

- Halt further degradation of the environment by the reduction of pollutant emissions.
- Increase public awareness and public participation in decision making processes.
- Introduction of cleaner technologies to all sectors.
- Protection and conservation of the nature and natural resources.

Weak compliance and lax enforcement are too well known facts from the period before 1989. Therefore the Policy declares law-abideness as one of the basic principles of the new environmental policy. This means the necessity of reconstruction of the legal system and the system of enforcement in such a way that each regulation will be strictly abided to, and that no opportunities will exist for circumvention of the law for reasons of "public interests" or "impossibility."

The other important principles contained in the Policy is the "Polluter Pays Principle." In the word of the Policy's strict implementation of the above principle means "placing full responsibility, including material liability, for the effects of pollution and other damages to the environment, upon the originator, i.e. subject utilizing the environmental resources."

To streamline implementation of the Policy and the Rio de Janeiro Agenda 21, the National Committee for Sustainable Development was established in 1994. The Committee consists of the representatives of the Central Government, Parliament and various NGOs. The Committee has reviewed various national policies including energy, transportation and industrial policies.

The National Environmental Policy formulates actions aimed at environmental improvements for various time horizons. Many actions since 1991 have led to achievements of short term goals (1991-1993). There are grounds to believe that environmental degradation in Poland has been halted and that in some areas there are even improvements. For instance the volume of untreated sewage decreased by 36 %. In 1980 Poland emitted 4.1 ml tones of SO<sub>2</sub> and now only 2.7 ml tones. These results were only partly due to economic recession at the beginning of the 1990s. After reaching, in 1994, the short-term horizon, the Implementation Program Through the Year 2000 was designed which envisages further environmental improvement.

### **3 INTERNATIONAL COMMITMENTS**

International obligations assumed by Poland in the field of environmental protection is another strong driving force in compliance and enforcement. Since Poland is a party to some 40 international treaties, it has strengthened its environmental policies to enable it to fulfill its obligations especially as far as transboundary pollution is concerned. It is worthy to mention that Poland signed the Second Sulphur Protocol in 1994 and ratified the UN Framework Convention on Climate Change. In 1993 Poland introduced a CO<sub>2</sub> emission fee of 0.04 USD which will be gradually increased in the future. A great deal of the agents whose activities pollute air with a transboundary effect had to undertake abatement measures.

### **4 ACCESSION TO THE ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD)**

From the very beginning of the 1989 political changes, Poland has pursued political and economic integration with western Europe and with other Organization for Economic Cooperation and Development Member States. An agreement defining principles of mutual cooperation was signed with this organization in 1991. One of the basic preconditions of Poland's membership is elimination of some gaps in Polish legislation by implementing of organizations Council Acts related to environmental health and safety. To change this situation, intensive drafting work was carried out on a Statute on chemical substances. In 1995 at the next Organization for Economic Cooperation and Development meeting Poland stated that it will adopt the Statute by the end of 1996.

### **5 INTEGRATION WITH THE EUROPEAN UNION**

Poland's willingness and determination to accede to the European Union is probably the strongest multi-aspect driving force behind compliance and enforcement programs in the country. Therefore it seems justified to present this development in more detail.

In 1991, "The European Agreement, establishing an association between the Republic of Poland, on the one part, and the European Communities and their Member States, on the other part" established a framework for the progressive development of free trade in goods, services and capital. In 1994, after entry into force of the European Agreement, Poland applied for membership in the European Union. It is expected that negotiation on Poland's accession to the European Union will start in 1998. As the European Union attaches a great importance to environmental protection, Poland has already undertaken a great number of steps to fulfill requirements for the membership.

The European Agreement confirmed the importance of the principle of sustainable development. Article 71.2 which provides that "Policies designed to bring about the economic and social development of Poland, in particular policies relating to industry including the mining sector, investment, agriculture, energy, transport, regional development and tourism should be guided by the principle of sustainable development. This entails ensuring that environmental considerations are fully incorporated into such policies from the outset". The European Agreement says also that cooperation shall seek to promote Community participation in Poland's efforts in both public and private sectors to modernize and restructure its industry, which will effect the transition from a centrally planned system to a market economy under conditions which ensure that the environment is protected (Article 72.1). In addition, cooperation in the field of energy includes the environmental impact of energy production and consumption as well as the promotion of energy saving and energy efficiency (Article 78.2).

#### 5.1 Approximation of laws

The European Agreement provides that the major precondition for Poland's economic integration into the European Community is the approximation of the country's existing and future legislation to that of the Community (Art. 68). The approximation of laws includes also the environment (Art. 69). Approximation of Polish legislation extends over a period of 10 years, once the European Agreement came into force. It seems worthy to mention that the *acquis communautaire* in the field of environment counts some 200 legal acts.

An important step towards European Community membership is approximation of some of Poland's environmental standards to levels presently existing in the European Community. Poland, like other Central and Eastern European countries, however, has some environmental standards which are similar or even more stringent than the European Community's or its member countries' comparable standards. The stringency of Poland's standards often does not correspond with the country's economic capabilities and therefore these standards are not always adequately complied with or enforced.

The harmonization process might offer a good opportunity to adopt feasible, realistic and enforceable environmental standards. As the realization of these standards cannot be achieved overnight, this process may be accomplished gradually with European Community standards as the ultimate goal.

Harmonization of environmental standards has become one of the central tasks for the Ministry of Environmental Protection. This task is aided by the EC PHARE Program, mainly by its sector devoted to institutional strengthening of environmental management.

#### 5.2 The approximation infrastructure

To develop a strong basis for the approximation process, the following steps were taken:

- a. A project on publication in Polish of the 9-volume collection of the European Union legislation on environmental protection has been launched. This work, to be completed in 1996, will reflect the state of European Union legislation up to the end of 1993. The four first volumes of this publication are already available on the market. Publication of the work, containing also "5th Environmental Action Program for 1993 - 2000", will eliminate one of the hindrances hampering the integration process, namely the language barrier. The removal of this barrier will ensure wide access to the European Union legislation for politicians, decision makers, scientific and research centers as well as business circles.
- b. A project on the development of methodology for the evaluation of environmental protection costs was undertaken. A part of the project addresses costs of harmonization and implementation of European Union legislation in Poland. Here, a general conclusion can be made: without a thorough knowledge of harmonization costs and funding sources, it is difficult to draft in a responsible manner, legal acts that are supposed to express time horizons for attainment of environmental quality defined in the European Union standards.
- c. Another important project, already completed and also funded by PHARE, dealt with examination of law and practice in the Union and a few member countries (Spain, Portugal, the Netherlands and Germany), in terms of creating the so called adjustment programs for the requirements of environmental protection for the environmentally-unfriendly sectors of the economy, and to transfer the functioning European Union solutions to Polish law and practice.
- d. Enhancement of environmental management in Poland is a project which is still being implemented. It should result in detailed critical analysis of the existing state of environmental management in Poland and propose amendments to the existing environmental management system, mainly a comprehensive set of goals, tasks, competencies, procedures and economic instruments in the field of environmental protection leading to enhancement of environmental management in Poland. The proposed amendments, influenced also by respective European Union legislation, should include the most rational division (allocation) of tasks and competencies between various administrative authorities and their levels.

### 5.3 The organization of the approximation process

The approximation process of Polish environmental legislation is regulated by two Decisions of the Council of Ministers: Decision 16/1994 and the Decision 133/1995.

The approximation process, commenced already in 1991, was dramatically accelerated after the Council of Ministers adopted on March 29, 1994 Decision No 16, on additional procedures to bring draft government legal acts in line with European Union legislation. Pursuant to the Decision 16/1994, the draft legal acts, prepared by the members of the Council of Ministers, heads of central offices of government, central administration and voivodes [heads of provinces] are subject to review in terms of their compliance with the European Union legislation. The review procedure includes preliminary and final opinions. Both of them should discuss the following issues:

- The scope of adjustment of a draft legal act to European Union legislation.
- Draft provisions that are not in line with European Union legislation.
- Envisaged procedures and dates of ultimate adjustment of provisions not in line with European Union legislation or discussion in favor of retaining temporarily discrepancies in this respect.

The Council of Ministers Decision No 133, adopted on 14 November 1995 aims at implementation of the European Commission "White Paper on the preparation of the Associated Countries of Central and Eastern Europe for integration into the Internal Market". In fulfillment of the Decision requirements, the various legal instruments listed in the White Paper have been allocated for transposal and implementation amongst appropriate ministries and other central authorities. It is interesting to note, that out of some 60 legal instruments contained in chapter 8 "Environment", only 7 are allocated to the Ministry of the Environment as coming within the sphere of its competence (lead ministry). In case of many other instruments mentioned there, the Ministry has the status of a cooperating ministry. Therefore, cross-sectorial cooperation becomes indispensable.

It is clearly stated in the White Paper that Environmental Policy is an essential component of the creation of the Internal Market. The White Paper stresses the importance of product-related environmental standards. Under this heading comes a substantive number of community legal acts on chemicals (restrictions on marketing, classification and labeling, environmental control of existing and new substances, ozone-depleting substances), Genetically Modified Organisms, product-related noise, transfer of waste etc. Some of them have been poorly regulated, if at all, as for instance chemicals or Genetically Modified Organisms. It is only now that these areas are being covered by the national legislation. However, as it is emphasized in the White Paper, equally important for undistorted functioning of the Internal Market is factual compliance and enforcement of the legislation. Any substantial failure to apply the common rules in any part of the internal market puts the rest of the system at risk and undermines its integrity.

## 6 NEW LEGISLATION

As described above, any new legal regulation has to take into account European Union legislation. For example it was the case of the three regulations of the Minister of the Environment issued in the 1995 in the area of environmental impact assessment: Regulation on the impact of local land use plans on the environment (of 9 March, 1995); Regulation on Investments harmful to the environment and human health and on environmental impact assessment (of 13 May, 1995); Regulation on environmental impact assessment of highways on the environment, agricultural lands, forests and protected cultural heritage (of 5 June, 1995). The above regulations, with the exception of public participation requirement, comply with the Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment.

To speed up the approximation process, the Ministry launched in June 1995 a project, sponsored by PHARE, on the preparation of a Draft Framework Act on the environment. Sectorial approach to regulating environmental protection, that has recently occurred in Poland, makes it difficult for effective transposal of certain European Union solutions of a more general nature, such as participation of the public in decision making process, or introduction of integrated pollution control (draft Directive on IPPC).

According to the Terms of Reference, the Framework Act should adopt appropriate principles, legal institutions, terminology and definitions of notions contained in the European Union legislation such as the Maastricht Treaty, Europe Agreement and framework acts of the secondary European legislation. Taking into account dynamic changes in the European Union environmental law, draft European Union legal acts should also be considered, including draft Directive on Integrated Pollution and Prevention Control (COM/93/423) and draft Directive on Air Quality Assessment and Management (COM/94/109). It is required that the European Union acts of "soft law" nature are taken into account as well. These include "5th Environmental Action Program for 1993 - 2000" and "A Community Strategy for Waste Management". For the sake of consistency of Polish environmental legal system, the Framework Act should also take into account the Organization for Economic Development's legislation and all other international treaties to which Poland is a party. It is planned that the drafting work will be completed in the Ministry by the end of 1996.

## 7 PRIVATIZATION

The 1990 Privatization Act of State-Owned Enterprises (hereinafter the "Privatization Law") is void of any express environmental considerations or requirements. Because of pressure from the Ministry of Environment and some investors' concern for potential environmental compliance and cleanup obligations, the Ministry of Privatization has begun to execute environmental audits of companies in the process of capital privatization. In 1993, to strengthen their cooperation, the Ministries of Privatization and Environmental Protection signed a Memorandum of Understanding creating an Inter-ministerial Environmental Unit to address environmental issues arising in the process of capital privatization. The Memorandum was renewed in 1995 and the Unit was empowered to extend its activities on other paths of privatization. The Unit is under joint supervision of the Director of the Department of Capital Privatization in the Ministry of Privatization and the Director of the Enforcement Department of the State Inspectorate for Environmental Protection.

The main task of the Unit is to develop practical solutions to environmental issues emerging in privatization transactions, such as the allocation environmental liabilities and implementation of pollution control equipment. The Unit has improved communication between the Ministry of Privatization and the Ministry of the Environment and introduced standard procedures for obtaining information on environmental compliance. The Unit requires the management of privatized companies through capital privatization to complete a detailed environmental survey and returned it to the Ministry of Privatization. In addition, the Unit consults local environmental authorities and obtains their evaluations of the environmental problems of individual companies. After evaluating the data collected, the Unit may conduct its own evaluation of the company or commission an environmental audit. The Unit analyzes all available environmental information, assists in the preparation of informal memoranda, compares the impact on the environment of offers received, and negotiates environmental provisions and related investment commitments in sale contracts. The activities of the Unit proved to be useful for the privatization process, compliance of the privatized companies and protection of the environment.

Lack of any cleanup standards for the polluted lands or water was considered as a serious obstacle in the privatization process. To eliminate this deficiency and make the cost of cleanup more transparent, the State Inspectorate for Environmental Protection issued in 1994 Methodological Guidelines for the Assessment of the Level of Pollution of Lands and

Groundwater by Chemical Substances in the Process of Remediation. In addition, the EBRD recently completed a Soil and Groundwater Contamination Standards Project, financed through the PHARE program, which developed strategies for establishing soil and groundwater contamination standards, estimated the costs of these strategies, and made recommendations as to how these standards could be implemented within the existing institutional framework.

In 1994, the State Inspectorate for Environmental Protection assessed the level of compliance with environmental requirements of 220 privatized companies. The general conclusion resulting from the assessment is that the privatization has a positive effect on the compliance of the assessed companies and the protection of the environment.

## 8 ECONOMIC INSTRUMENTS

The fees for the use of the environment and fines for violation of environmental requirements, mainly the terms of a permit, which are the most popular economic instruments in Poland, have existed in Poland since the 1970's, but they were ineffective for more than a decade. The main reasons for their ineffectiveness were a lack of free market stimuli, lax enforcement, and lavish state subsidies (the latter ones, in various forms, were virtually discontinued in 1991).

Between 1989 and 1992, the Government's policy toward environmental fees and fines policy was substantially reformed. The fees and fines were dramatically increased and the rate of inflation has been included in the fee rate. Some of the fees, such as the fees for SO<sub>2</sub> emissions which amount to US \$80 per ton of emission, have already provided strong incentives for abatement although they are still much lower than the marginal cost of abatement. Therefore the system serves mainly to raise revenue rather than to reduce pollution.

Today, the fine which is paid from the profits of the enterprise, poses a heavy burden for the polluter. The existing law, however, allows for some flexibility. If the polluter commits to eliminate the source of the fined pollution, the fine can be calculated into the amount of money spent by the polluter on the appropriate pollution control measures. According to the State Inspectorate this policy has appeared as an extremely effective measure of enforcement.

Stronger enforcement and market signals (as desire to increase competitiveness) caused that there is a big demand of the polluters for financial resources. The resources collected from fees and fines, debt-for-environment swaps and international assistance (PHARE, World Bank, bilateral help) are managed by a unique "green" financial infrastructure whose role in environmental investment in Poland cannot be overstated. This financial infrastructure consists of:

- National Fund for Environmental Protection and Water Management.
- Regional and Community Environmental Funds.
- Bank for Environmental Protection.
- ECOFUND.

The main task of the environmental funds is to support implementation of the NEP goals. After a period of implementing mainly "end of pipe" projects, The National and Regional Funds are focusing on support of cleaner production technologies. The main criterion for projects to be financed by environmental funds and the Bank for Environmental Protection is expected environmental effect.

Soft loans are a basic form of financing by the National and Regional Funds. The National Fund is able to support up to 50%, or in a case of local administration projects - up to 70%. The ECOFUND provides financial support only in the form of non-repayable grants which basically encompass 10-30% of a project cost. The main form in which the Bank for Environmental Protection supports projects for environmental protection is preferential credit. It is noteworthy that the demand for this sort of financing is much higher than available capital of the funds and the Bank.

## **9 VOLUNTARY MEASURES**

In addition to command and control measures and economic instruments, there are emerging now various types of voluntary measures mainly eco-audit, eco-label and environmental agreements. The goal of these schemes is to promote and enhance compliance with environmental requirements. By adhering to them, individual companies or industrial sectors would be able to improve their compliance record and therefore their brand image, credibility and competitiveness.

At the European Community level, the Council of Ministers has adopted Regulation EEC/880/92 on a Community eco-label award scheme. The main idea of the Regulation is to promote production, sale and use of products with the least harmful effects to the environment throughout their life cycle. The regulation seeks to allow the consumers to be better informed about the effects of products on the environment. Under specified conditions producers can be awarded with a green label.

The other voluntary measure adopted by the Community is Regulation 1836/93 on the eco-management and audit scheme (EMAS). In distinction from the eco-label scheme, the EMAS does not focus on product but rather on industrial production processes and activities. Under specified conditions (as compliance with environmental requirements) companies participating in the scheme can be awarded a special logo of a company friendly to the environment which can be utilized on brochures, reports, letterheads, information sheet, etc.

Although neither eco-label nor EMAS legislation has been enacted in Poland yet, there is a surprisingly high interest on the side of the industry in having them incorporated in Polish legal system. There is a growing belief that products awarded in Poland with eco-label and recognized on the European Union market could be much more competitive than others. A great number of big Polish companies would like to participate in EMAS because they expect that their partners from European Union countries can sooner or later demand of them "green image."

## **10 PUBLIC AWARENESS, ACCESS TO ENVIRONMENTAL INFORMATION AND PARTICIPATION IN DECISION MAKING**

According to various public opinion polls held by the Institute for Sustainable Development (Warsaw) in 1993, environmental awareness in Poland is growing steadily. The polls showed that, together with mounting crime and other social aberrations, environmental pollution is regarded as the main threat to Poland and its citizens. The polls indicated that provincial and local authorities are considered to be the organizations which most efficiently protect the environment. Over the last year, provincial and local authorities gained the largest share of positive scores in public opinion polls.

It is interesting to note that most of those interviewed had not heard about NGOs operating in their local commune or province. Those who were aware of such activities considered their efficiency negligible.

The percentage of individuals who regard the protection of the environment as worthwhile even at the cost of increased unemployment as a result of closure of factories which cause a particular threat to the environment has declined. Thus, these opinion polls provide information that the public in general is ready to support environmental protection but not at the expense of severe economic hardship.

There is an abundance of environmental information in the form of statistical data, official reports, etc. However, access to information on planned or existing industrial activities likely to harm or harming the environment is still limited. This indicates that the present law should be redesigned so as to ease access to and strengthen the influence of NGOs in administrative and legal actions. A mounting pressure from NGOs and the necessity to approximate Polish legislation to European Union legislation will result in transposal of the Council Directive 90/313/EEC on the freedom of access to information on the environment and other directives dealing with public participation in environmental decision making. Appropriate provisions transposing the relevant European Union directives have already been drafted within the work on the Framework Law on the Environment.

## **11 CLEANER TECHNOLOGY**

The cleaner production movement is mushrooming now in Poland. It could not happen without a genuine interest of the industry. The movement is based on the Cleaner Production Declaration and on the letter of intent on cooperation in this field signed by the Minister of the Environment and the Minister of Industry and Trade. The movement was strongly reinforced by the fact that the III World Seminar on Cleaner Production was held in Poland in 1994. Within a program sponsored by the Norwegian government, 800 individuals from 500 industrial plants were trained in the field of cleaner production. Demonstration Cleaner Production projects were implemented in 200 of these plants. Recently, the World Environment Center established three Pollution Prevention Centers in Poland which have undertaken vigorous activity in various sectors of the economy.

In the future Cleaner Production Centers and Pollution Prevention Centers could be of some help for applicants asking environmental funds for financing of their projects. Mainly, they could help evaluate alternative technologies. A similar help could be extended to the funds themselves.

## **12 ENHANCEMENT OF THE ENFORCEMENT CAPACITY OF THE STATE INSPECTORATE FOR ENVIRONMENTAL PROTECTION**

The most important development which has occurred since 1989 for the enhancement of enforcement in Poland was the enactment of the Law on the State Inspectorate for Environmental Protection in 1991. The fundamental change that the State Inspectorate Law introduced was the separation of responsibility for enforcement from the regional authorities' decision-making functions. Until 1991, the same regional authority was responsible for both issuing permits and licenses and enforcing them. In addition, the same body was, and still is, responsible for economic development of the region and employment. Therefore, not

surprisingly, the environmental requirements were not enforced strictly. Prior to 1991, the State Inspectorate for Environmental Protection, as a "toothless" creature, was virtually ineffective. Presently, being independent from regional and local state or municipal authorities, the State Inspectorate carries out its tasks much better.

The main tasks of the State Inspectorate include:

- Enforcing compliance with the laws and regulations on protection of the environment and rational utilization of natural resources.
- Enforcing compliance with permits and licenses.
- Participating in sitting proceedings.
- Overseeing implementation of a new installations which are likely to have adverse impact on the environment.
- Controlling the proper functioning of the pollution control equipment.
- Halting activities which violate environmental requirements.
- Cooperating with other enforcement organs, self-governing authorities and NGOs.
- Establishing and running the state environmental monitoring system and assessing the state of the environment.
- Designing and implementing analytical and sampling methodologies.
- Establishing conditions necessary to prevent environmental emergencies and to restore the environment to its proper state.

The inspectors of the State Inspectorate are empowered to:

- Enter at any time an area of real estate, installation or their parts where economic activity is carried out accompanied by experts and with any necessary equipment.
- Inspect the state of the environment and assess it in the light of applicable environmental legislation and compliance of the site with the terms of permit.
- Evaluate use of technical equipment on the site.
- Assess the performance of pollution control equipment installed on the site.
- Request information necessary to assess the state of the site.
- Obtain access to documents and data related to the inspection.

The management of the installation under inspection must allow the inspector to perform its duties. When the inspection is completed, the inspector writes a protocol which is also delivered to the management of the installation.

On the basis of the inspection, the inspector has the power to:

- Issue a post-inspection order to the inspected installation.
- Issue an administrative order.

- 
- Undertake enforcement action, if such obligation results from binding law or an applicable administrative order.

Article 13 of the State Inspectorate Law enumerates the State Inspectorate's greatest powers. It provides that the inspector may:

- Impose an obligation to remove the cause of environmentally harmful activity in prescribed time.
- Impose a fine.
- Halt activity which violates environmental protection requirements.

#### 12.1 The special case of the "80" heaviest polluters

In 1990 a list of the 80 heaviest polluters in Poland was prepared by the State Inspectorate in close cooperation with regional environmental authorities. The following criteria were applied: frequency and gravity of the violation of environmental requirements, level of concentration of toxic pollutants, location of the polluter and territorial range of polluter's harmful impact.

The main goal of the list was to bring the "80" into compliance with applicable environmental requirements. To achieve this goal, regional authorities issued administrative orders by which they bound each of the polluters to install or modernize pollution control equipment and to undertake the appropriate changes of technology and other necessary measures. The orders were preceded by environmental audits which provided necessary information about the environmental performance of the polluters. Financial and economic viability were taken into account and the polluters themselves had to prepare and submit programs for achieving compliance.

The State Inspectorate has been entrusted with the special responsibility for enforcing this process by frequent, almost daily, inspections and tough application of enforcement instruments designed for each individual case. The enterprises which were not able to present feasible programs had to stop their operations partly or totally.

The 1994 report on the implementation of the program by the "80," describes notable progress in the abatement of pollution emitted or discharged by the "80," despite many economic hardships resulting in delays. The most important is a decrease of emissions of suspended particulate by 67 percent, gases 44 and wastes 42 percent. These results can only partly be attributed to economic recession and closure of the worst of the "80." In the reporting year the list of the "80" has been left by 14 companies which achieved compliance with the environmental requirements and 5 other ones were added. It is expected that 16 other companies should be in compliance by the end of 1996. It is worthy to note that similar programs have been adopted towards 800 companies at the regional (voivodship) level.

#### 12.2 Strengthen organizational authority and institutional capacity for the State Inspectorate

There is a general consensus that an autonomous status of the State Inspectorate adopted in 1991 have substantially strengthened its the enforcement activities. The State Inspectorate, in its efforts to increase its efficacy, is looking for experience sharing with other enforcement authorities or their organizations. One of them is the European Union Network of Environmental Enforcement Authorities.

The organization and activities of the network was extensively presented by Mr. David Slater of the HMIP at the 1994 Third International Conference on Environmental Enforcement. Mr. Slater said that the network served as a very practical forum for informal exchange of ideas and experience among those at the working face of environmental regulation. Since European Union environmental legislation is steadily growing as a part of the Polish legal system, therefore shortly after the Conference Poland showed an interest in having some links with the body as an observer. Unfortunately, a reaction on the European Union side was not very encouraging at that time. It is believed that two years later all obstacles which existed in 1994 have already disappeared. We believe that what Mr. Slater stated in conclusion of his statement is also valid for Poland: "One thing is very clear. The problems associated with protecting the environment from industry activity are common to most if not all countries. Sharing experience through well organized but largely informal network can help each of us do our job much better."

### **13 CONCLUSIONS**

Transition to parliamentary democracy and a market-based economy, sound economic growth, privatization and many stimuli from the free market are very important driving forces behind enhanced compliance and enforcement. Poland's international commitment, efforts to join OECD and integrate with the European Union are the basic causes of the fundamental reform of Polish legal system and new approach to enforcement. The harmonization process might offer a good opportunity to adopt feasible, realistic and enforceable environmental standards. To operate within the Internal Market, Polish companies will have to comply with the same standards as the European Union companies. A consistent harmonization will result in further democratization of the Polish legal system. This could broaden public participation in environmental decision making and its larger involvement in the enforcement process. Close relations of the State Inspectorate with the European Union Network of Enforcement Authorities could contribute to the strengthening of its enforcement efficacy.

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## **DRIVING FORCES FOR SUSTAINABLE ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT PROGRAM IN AFRICA WITH PARTICULAR REFERENCE TO NIGERIA**

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### **SUMMARY**

In Africa, establishing an environmental compliance and enforcement program is a very recent undertaking and for many countries, it is just being initiated. The previous preoccupation of governments after independence has focused on attracting investments for establishing industries with concessions that gave little or no regard to environmental considerations.

The driving forces for the current response to establish compliance and enforcement programs is externally driven and it is by virtue of the various initiatives of the United Nations and its agencies over the last 8 years. The critical issues are funding, staffing, and technical capacity as well as availability of enforceable legal instruments. The challenges are many and diverse, depending on each nation and often include, interagency conflicts, weak legal instruments, infrastructure, economic incentives, political instability and leadership crises but are not beyond resolution.

Sustaining and building capacity for compliance and enforcement still appears to depend largely on the United Nations agencies and other international assistance. National governments must begin to demonstrate greater commitment to environmental protection and mobilize internal resources to sustain compliance and enforcement programs in the long run.

### **1 HISTORICAL BACKGROUND**

The late 1950s and most of the 60s witnessed a rapid political change by way of independence across Africa. However, no sooner had the wave of political independence settled down than the challenges of nation building and governance began to manifest, first in the economies of the new and fledging nations and later in their environmental problems. While the economic challenges were traceable partly, to the management (or mismanagement) styles of the new African leaders, and largely to the international economic systems of protectionism, falling commodity prices, as well as the energy crisis of the 1970s, the environmental challenges resulted from a combination of the economic challenges and natural hazards such as drought and desertification.

All over Africa, national governments' responses to these earlier challenges were the creation of Ministries of Natural Resources (and/or Environment). This approach was seen as a logical decision of government since environmental concerns were viewed from the angle of natural resources as a strong contributor to the economy in the same way as mining and agriculture. Industrialization was perceived not only as the engine and indicator of development but as a symbol of achievement and a measure of the success of the new political overlords.

Consequently, in the race to attract industrial investments large concessions were made not only on tax but also in terms of environmental impact considerations and the use of natural resources by the industries. Siting of industries was governed largely by political consideration. There were no laws on hazardous waste management or industrial pollution control except for their passing mention under worker safety regulations in the Mining Acts or other Acts on natural resources. Throughout black Africa what existed were Public Health Acts whose focus was the control of mosquitoes, general sanitation for the control of communicable diseases and the provision of portable water. Therefore, the tradition of compliance monitoring and enforcement that was prevalent in most African nations was the Public Health Inspectors of the colonial era.

## 2 DRIVING FORCES

The decision to create environmental compliance and enforcement programs in Africa is a very recent and on-going initiative. It is an initiative resulting totally from external driving forces. Although the initiative was kindled by the 1972 Stockholm Conference on Human Environment, except for, and even with, Ghana which created an Environmental Protection Council in 1974, the initiative remained dormant all over Africa until 1987. However, from 1987 to date, tremendous progress has been made in the establishment and enhancement of environmental compliance and enforcement programs in Africa due to the following driving forces:

- Initiatives arising from the decisions of the United Nations General Assembly to:
  - Set up the World Commission on Environment and Development, 1987, which produced the Report, "Our Common Future".
  - Convene the United Nations Conference on Environment and Development in Rio-de-Janeiro, 1992 (Resolution 44/228 of 22 December, 1989) leading to the blue print: AGENDA 21.
- Efforts of the United Nations Environment Program, particularly:
  - The catalytic efforts of the various Program Activity Centers of UNEP by way of information dissemination and training.
  - The negotiations for the various conventions on e.g. Ozone Layer Protection - 1987, Transboundary Movement of Hazardous Wastes - 1989, Climate Change - 1992, Biological Diversity - 1992, Drought and Desertification - 1994.
- Initiatives of especially the World Bank and to a lesser extent the World Wildlife Fund (WWF) in supporting the development and implementation of National Environmental Action Plans (NEAPs) and National Conservation Strategy (NCS)
- Sad experience of certain nations who have become victims of the dumping of toxic wastes.

- Post-Rio initiatives of multilateral agencies particularly the United Nations Development Program (UNDP), the United Nations Industrial Development Organization (UNIDO), the World Bank and the requirements for funding assistance from the Global Environment Facility (GEF), the financial mechanism entity for the implementation of some of the major conventions.
- General global awareness on environmental issues and the increasing criticism of governments inaction by the public, the press and the environmental nongovernmental organizations.
- Governments' responsiveness through the enactment of enabling legislations and the establishment of the appropriate institutional frameworks.

Over the years, the catalytic role of the UN Agencies particularly the UNEP and the Economic Commission for African (ECA) working in collaboration with the Organization of African Unity (OAU) have mobilized concerted regional actions for sustainable development as shown by:

- The Monrovia Declaration of 1979.
- The Lagos Plan of Action.
- 1980 African Ministerial Conference on Environment.
- AMCEN Cairo 1985.
- Regional Conference on Environment and Sustainable Development in Africa, Kampala Uganda, 1989.
- The Bamako Conference, Mali 1991.

The Lagos Plan of Action, for example, has been described as one of the most comprehensive, bold and forward-looking regional plans for economic recovery and sustainable development anywhere in the world. Unfortunately these regional initiatives, generally, did not record measurable success in terms of establishing or enhancing environmental compliance and enforcement. The current status of the establishment of institutional frameworks for environmental protection in Africa is shown in table 1 on the following page.

### **3 CRITICAL ISSUES FOR BUILDING COMPLIANCE AND ENFORCEMENT PROGRAMS**

The main issues that often arise in developing or enhancing compliance and enforcement programs in Africa are:

- Funding.
- Staffing and technical capacity.
- Availability of legal Instruments for enforcement.
- Delineation of roles among the tiers of government i.e. federal, state, and local government authority.
- Prioritization of environmental problems and polluting facilities.
- Inspection approach - "multi"-versus "single-media"

**Table 1. Institutional Framework Adopted in Selected African Countries**

Country	Pre-Nation Environmental Action Plans (NEAPs) and/or National Conservation Strategy (NCS)	Recommended Institutions by NEAP/NCS	Remarks
Botswana	Ministry of Local Government and Lands	NCS Advisory Board and Coordination Agency	Approved but in progress for new ministerial home for coordinating agencies
Ethiopia	Ministry of Natural Resources Development and Environment Protection Conservation Strategy Secretariat (1990)	National Environmental Protection Authority	Established in office of Prime Minister
The Gambia	Environment Unit, Ministry of Natural Resources	National Environmental Agency	Established in office of President
Ghana	Environmental Protection Council (1974)	Environmental Protection Agency (1994) Ministry of Environment, Science & Technology (MEST-1993)	Recommended by MEST and approved
Guinea	Department of Natural Resources & Environment (1986); National Environmental Council (1987)		Institutional arrangements not yet designed
Kenya	National Environmental Secretariat	Kenya Environmental Agency	Recommended by NEAP launch
Mali	Ministry of Rural Development and the Environment -1994	Cellule de Suivi, d'Evaluation/PNLCD	Responsible for Desertification Control Plan; likely to coordinate NEAP
Nigeria	Environmental Division in the Ministry of Industry, 1978; Environmental Protection & Planning Division in Ministry of Works & Housing (MW&H) 1979; Federal Environmental Protection Agency (MW&H 1988) Presidency 1992		
Senegal	Ministry de L'Environnement et de la Produit de la Nature	Conseil Superieur Resources Naturelles et de L'Environnement (CONSERE) 1993	Inter-Ministry Council for Environmental Policy Coordination - responsible for NEAP
Tanzania	National Environmental Management Council (1983) ; Ministry of Tourism, Natural Resources and Environment (1990), Department of the Environment		No decision on institutional arrangement yet
Uganda	Ministry of Natural Resources & the Environment (1994; Environmental Directorate/Department of Environmental Protection (1994)	National Environmental Management Authority	Approved
Zambia	Ministry of Environmental and Natural Resources (1991); National Environmental Council (1990)		No new institution created

\*Source: World Resources Institute 1995 with modification

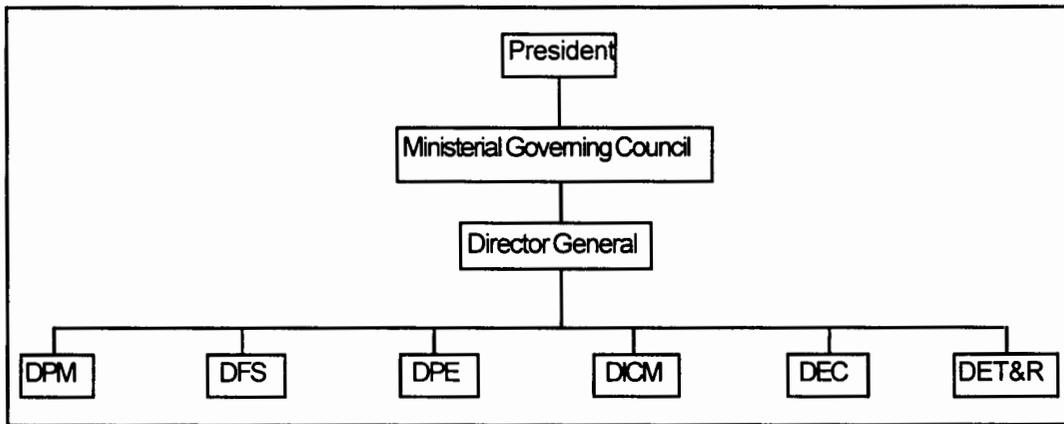
In the case of Nigeria, the establishment of the Federal Environmental Protection Agency, being a swift response to the illegal dumping of Italian toxic wastes in the country, was greeted by a general public euphoria with government promising an extra-budgetary take-off grant of 500 million Naira (US \$ 80 million) for each of the first two years. The inability of government to release any part of the grant posed serious challenges to the agency. To overcome the funding constraint, two other approaches were taken. One, the agency sought and secured external assistance by way of World Bank grants (soft loans) to the tune of US \$ 25 million for setting up an environmental data bank, conducting studies and procuring monitoring equipment and vehicles over a 3 year period. The second was by amending the agency's act to reflect allocation of one quarter of the 2% national revenue earmarked as an Ecological Fund by the constitution as a statutory grant for the programs of the agency on a yearly basis. The difficulty of securing this grant also, is now prompting the agency to begin to think of charging fees for many of its activities (e.g. inspection, audit, etc.) and to seek to establish an ECOFUND along the line of the SUPERFUND of the United States.

### 3.1 Staffing and technical capacity

For many African nations, the Universities provide the ready pool of manpower trained in basic disciplines of environmental sciences. Nigeria's Federal Environmental Protection Agency (FEPA) drew from such a pool and to a lesser extent, industries and line ministries, and trained them by sending them on sponsored short courses in the Netherlands, the US, UK, Canada, Japan, Germany, Belgium and Nairobi UNEP. In addition, short term resident consultants from overseas and within the country also provided avenues for quick interaction by the newly recruited staff to enable them to face the challenge of compliance monitoring and enforcement within the shortest possible time. Materials from the biennial International Conference on Enforcement remain the backbone of the agency's in-house training. Credible, and experienced consultant analytical chemists, physicists and microbiologists were also retained on contract to provide a ready back up for the inspection and monitoring activities of the new agency until a well equipped laboratory was established. The National Reference Laboratory of the agency was, in 1990, initially set up with the equipment donated by the Japanese International Cooperation Agency (JICA) and upgraded later by the government's internal efforts. The revised organizational setup of the agency is shown in Figure 1 on the following page.

### 3.2 Role delineation among tiers of government.

In many African countries, urban sanitation and municipal waste management are clearly the statutory (constitutional) responsibility of local government authorities. Similarly, ports (sea and airport) issues are of federal concern under the commerce clause. On the other hand, the issue of industry often appears to be concurrently listed for federal and state (or regional) governments. For countries operating true federal systems of government, both the state and federal environmental protection agencies are legally authorized to monitor and enforce industrial compliance. But in unitary states or national governments with a strong center, like military states, the entire authority for pollution control and industrial compliance monitoring

**Figure 1. Federal Environmental Protection Agency Revised Organizational Chart 1994****Department descriptions and their roles and responsibilities for Figure 1:****Department of Personnel Management (DPM)**

- i. General administration
- ii. Recruitment promotion and discipline
- iii. Staff welfare
- iv. Staff training (coordination)

**Department of Finance and Supply (DFS)**

- i. Finance
- ii. Store
- iii. General procedure

**Department of Planning and Evaluation (DPE)**

- i. Planning
- ii. Project monitoring and evaluation
- iii. Information management and data bank
- iv. Library services and publication
- v. Environmental impact assessment
- vi. Remote sensing and Geographic Information System (GIS)
- vii. Technical assistance and studies
- viii. Environmental education
- ix. Budget, rolling and perspective plans.

**Department of Inspectorate and Compliance Monitoring (DICM)**

- i. Industrial compliance and monitoring of standards
- ii. Toxic waste dump watch
- iii. Chemicals and pesticide registration
- iv. Accreditation, licensing and permits
- v. Liaison with states environmental agencies on enforcement
- vii. Enforcement and control of regional and international transboundary movement of hazardous/toxic waste

- viii. Municipal wastes compliance monitoring
- ix. CITES compliance

Department of Environmental Conservation (DEC)

- i. Biodiversity conservation
- ii. Wetlands and protected areas
- iii. Wildlife conservation and management
- iv. Soil and water conservation
- v. Erosion and flood control
- vi. Drought and desertification control
- vii. Watershed management

Department of environmental technology and research (DET&R)

- i. Waste management technology
- ii. Pollution abatement technology
- iii. Regulation and setting of standards for pollution control.
- iv. Instrumentation.
- v. Laboratory services.
- vi. Engineering services.
- vii. Research and development.

is often vested in the federal agency. Therefore, to carry the state or regional governments along, an arrangement must be worked out to devolve some of the federal powers to the state environmental protection agencies.

The Nigeria agency operates through ten zonal (regional offices) in Port-Harcourt, Ibadan, Owerri, Kaduna, Kano, Maiduguri, Bauchi, Minna, Jos and Uyo. It has also ensured that each of the 30 states of the federal system creates its own state environmental protection agency by strictly following a generic guideline established by the federal agency for easy harmonization of functions. State environmental protection agencies that are established enough with qualified staff are encouraged to carry out inspections focusing more on pollution of

**Table 2. Legal Instruments for Pollution Control in Nigeria**

- |     |  |
|-----|--|
| 1.  | Federal Environmental Protection Agency Act, 1988.             |
| 2.  | Federal Environmental Protection Agency Act, 1988.             |
| 3.  | Hazardous Wastes (Criminal Provisions) Act, 1988.              |
| 4.  | Import Prohibitions (Contaminated Foods) Act, 1989.            |
| 5.  | National Policy on the Environment, 1989.                      |
| 6.  | National Guidelines and Standards for Environmental.           |
| 7.  | Pollution Control in Nigeria, 1990.                            |
| 8.  | National Effluent Limitation Regulation, 1991.                 |
| 9.  | Pollution Abatement in Industries and Facilities.              |
| 10. | Generating Wastes Regulation, 1991.                            |
| 11. | Solid and Hazardous Wastes Management Regulations, 1991.       |
| 12. | Federal Environmental Protection Agency (Amendment) Act, 1992. |
| 13. | Environmental Impact Assessment Act, 1992.                     |

their water bodies, soil contamination and air pollution and terminating their investigation at the outfall of the industrial facilities. Serious violations are communicated to the agency who in turn initiates enforcement.

### 3.3 Legal instruments for enforcement.

The basis for environmental compliance monitoring and enforcement is in the legal instruments. These instruments spell out actions or non-actions that constitute offenses by facilities and individuals, the responses expected of the regulating agencies, sanctions and penalties to be meted out to the offending facilities and/or individuals. The provisions of legal instruments must be clear, unambiguous and enforceable. The regulating Agency must be empowered to make regulations. So far, ten legal instruments have been developed for pollution control in Nigeria (Table 2). In addition the agency has established seven types of permits regulating pollution and management of solid and hazardous wastes.

### 3.4 Prioritization of environmental problems and polluting facilities.

Funding limitations and a dearth of qualified staff at the inception of a compliance and enforcement programs call for the need to prioritize the environmental problems which should be tackled first. Is the priority municipal wastes, industrial pollution or water contamination?

These depend on the pressing environmental problems facing each country, but it is best to focus attention first on pressing problems for which no other ministry or agency has been previously responsible. Also among the polluting facilities the worst must be tackled first.

### 3.5 Inspection approach

Funding and staffing limitations make the multimedia approach to inspection the logical step for adoption.

## 4 CHALLENGES AND THEIR RESOLUTION

Centralizing environmental management and enforcement in a single agency or ministry in Africa as in many developed nations worldwide is a new development. Environmental enforcement where it exist are fragmented in various Line Ministries especially Health, Works and Housing, Agriculture, Petroleum Resources, Water Resources, Mineral Resources etc.

The emergence of an environment agency or ministry with its perceived enormous powers normally creates frictions with industries wanting business-as-usual and also with the traditional ministries who are reluctant to relinquish the environmental enforcement part of their functions which they used to perform. Most of such functions were not thrust upon them by law but by administrative directive of government or sometimes simply as a unilateral initiative of the ministry to fill an identified gap. Unfortunately matters are not helped by the ambiguities of the laws of the competing ministries and the non-deletion of aspects of the old ministry's laws now transferred to the new agency.

From my experience in Nigeria over the last 5 years, the main challenges faced by our enforcement and compliance programs are as follows:

- Interagency conflicts
- Inadequate legal instruments

- Infrastructure
- Agency-industry relations
- Economic incentives
- Leadership crises
- Loss of staff to other sectors
- Pressure groups and environment in politics

#### 4.1 Interagency conflicts

The most disturbing role-conflict of Federal Environment Protection Agency with any other agency is with the National Agency for Food and Drug Administration and Control (NAFDAC) established by Decree 15 of 1993 over the monitoring, regulation and control of hazardous chemicals and pesticides. Indeed last year, NAFDAC went as far as formulating regulations on pesticide use, importation and control without inviting comments from either FEPA or the Department of Pest Control Services of the Ministry of Agriculture whereas FEPA is the Designated National Authority (DNA) for potentially toxic chemicals and pesticides under the UNEP/FAO Prior Informed Consent (PIC) Procedure and the London Guidelines. With the support of the Pharmaceutical Group of the Manufacturers Association of Nigeria (PG-MAN) vitriolic attacks were unleashed on FEPA in the press and electronic media especially in the last 12 months.

Through consistent public enlightenment, diligent and credible enforcement strategies exposing serious lapses in the procedure of the other agency and the confirmation by security agencies of government, FEPA has been able to maintain its statutory functions.

#### 4.2 Legal instruments

In a situation where laws were enacted following a sad environmental pollution or disaster experience some aspects of the laws may be borne out of passion leading to extremely stiff penalties, or serious lacuna (loopholes) making enforcement difficult. For example, the Harmful Wastes (Criminal Provisions) Act promulgated following the sad experience of toxic waste dumping in Nigeria prescribes a sweeping ban on all wastes without regards to green wastes such as recyclable used plastics and fibers both of which are in high demand in the country's plastics and blanket industries. This has been redressed through administrative procedures.

Another challenge arising from weakness of the enforcement agency's law is the attempt to avoid offending some powerful ministers or ministries, who might block the entire new Act if it attempts to erode some of its traditional powers. This often leads to unfortunate trade-offs which later make enforcement difficult. One such example is the FEPA Enabling Act which rather than clearly vesting the authority to control oil pollution in the agency merely says that "The Agency shall cooperate with the Department of Petroleum Resources for the removal of oil-related pollutant discharged into the Nigerian environment and play such supportive role as the Ministry of Petroleum Resources may from time to time request from the Agency."

#### 4.3 Infrastructure

Effective environmental compliance and enforcement programs in a developing country while requiring office building, residential quarters for staff and laboratories also and more importantly require central waste management infrastructures such as sanitary and hazardous

landfills, treatment facilities, etc. Until enforcement has been firmly established it is difficult to get business entrepreneurs who will be willing to invest in such ventures. This has been the case with Nigeria. The government would have to provide such infrastructure and charge users as appropriate or go into partnership with businessmen to establish the infrastructure. Nigeria's efforts to seek external investment from multilateral agencies has not been successful. We have had to coerce individual facilities to build their own treatment plants or go into cooperatives to do it since the agency's law clearly vests the responsibility to treat waste on the industry generating the wastes. We have achieved a commendable level of success in this regard.

#### 4.4 Agency-industry relations

Industries are usually reluctant to commit extra investment on pollution abatement until enforcement begins and offenders are being penalized. They might even put pressure on the government and try to blackmail the enforcement agency. In Nigeria, we have had to give a 5 year moratorium since 1990 for industry to comply. While this was on, massive enlightenment was mounted for the public and the industries. By way of public complaints from individuals and nongovernmental organizations as well as the press, industries realized that there was no room to hide any longer.

Our enforcement began by way of warnings. Then at the 1995 World Environment Day Celebrations we instituted the Environment-Friendly Industry of the Year Awards. Ten industrial facilities were so recognized last year and all of them made a big issue of it in their corporate promotion. Having warmed our hearts to the industries, we started this year by shutting down two polluting facilities. The public was happy and the facilities quickly began to comply.

#### 4.5 Economic instruments

With the downturn in the economy and increasing external debt of African nations, industries have been facing very hard times. The absence of economic incentives and access to soft loans make it difficult for industries to invest in pollution abatement. Not only has this slowed down the pace of compliance with environmental laws and regulations by industries, it has made enforcement rather difficult. FEPA is currently conducting a study of industrial pollution and use of economic instruments in Nigeria under the World Bank assisted Environmental Management Program. It is hoped that when this is completed it will be adopted by the Planning and Finance Ministries.

#### 4.6 Leadership crises

Stable leadership of the environment agency is a sine qua non requirement of an effective compliance and enforcement program. However such leadership must be well informed on environmental issues and have the capacity to learn fast on the job. He or she must also have good management capability, an excellent vision for the Agency and be self confident rather than feeling threatened by subordinates. The leadership crisis at FEPA in 1993 was a severe setback for the Nigeria's environmental compliance and enforcement program.

#### 4.7 Loss of staff to other sectors

Quite a good number of the well trained staff of the agency have had to resign their appointment in the last 12 months. The main reason is the general low level of remuneration in the public sector and other frustrations of a depressed economy. Unlike in the developed countries such staff losses are not to the environment related private sector but are to unrelated fields or even outright emigration out of the country. It takes a minimum of 2 years to train a replacement to occupy their positions. The agency is now trying to convince government to place enforcement staff on a special salary structure.

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#### 4.8 Pressure groups and environment in politics

Increasing global awareness of environmental issues has both negative and positive impacts especially in political volatile states. For example, while increasing awareness engenders consciousness and promotes environmental protection ethics, an uneasy situation arises when such consciousness becomes a tool of political struggles or aspirations. Nigeria has its own share in the Ogoni oil pollution issues over the last 2 years. An environment agency has the responsibility to respond quickly by establishing a legally-binding procedure to address issues of compensation, remediation and liability for pollution in order to diffuse such tensions.

One extreme side to the growing environmental consciousness was the case of a nongovernmental agency trying to institute a court injunction against the agency for allowing an abandoned ship to remain in the nation's wharf because, according to the group, "the ship constitutes a pollution of the ocean waters"! This is in spite of their awareness of the functions of the Nigerian Navy, the Nigerian Ports Authority, the Nigerian Maritime Authority and the Ministry of Transport.

### 5 CONCLUSION

The driving forces for establishing and enhancing environmental compliance and enforcement in Africa are externally driven and they reside in the initiatives of the United Nations and its various agencies. The critical issues are funding, trained manpower and legal instruments. The enforcement program faces challenges depending on the peculiar circumstances of each nation. Therefore viable strategies must continue to be evolved to overcome the challenges. This is the arrangement in the past two years in Nigeria, the World Bank and the UNDP assisted projects have been the main factors sustaining environmental protection efforts in the areas of capacity building, institutional strengthening, review of the legal framework and execution of certain programs under the agency's Action Plan. There is the need to improve national commitment to environmental protection by mobilizing internal resources if the compliance and enforcement program is to be sustained.



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## THE IMPACT OF DRIVING FORCES ON ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT PROGRAMS IN MÉXICO

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### 1 INTRODUCTION

Mexico's concern for environmental protection and ecological equilibrium was not borne out of the North American Free Trade Agreement, as many believe. The system of environmental treaties established in NAFTA undoubtedly constitutes an element to influence our own environmental policies, but it also shows the convergence between our national dynamics, characteristic of the development of Mexico, and global trends. At the end of this millennium, new paradigms have arisen, which our country is approaching from its own historic perspective.

Mexico has arrived at this end of the century after a long period of political stability, social peace and economic growth. Today, with a population of close to ninety million, mostly urban (70%), we are facing a new social reality, characterized by the presence of a more informed and participatory society, whose presence is felt with great intensity in current national debate on topics including political reform, economic programs, and the environmental problem.

Like the rest of international society, we too have witnessed the decline of the political and economic order established after World War II, as well as the breakdown of some agreements under the terms of the 1919 Treaty of Versailles.

The accelerated pace of technological innovation imposes new forms of competition and efficiency on our production systems, compromised by growing competition from foreign markets and products. As a consequence, our participation constantly increases in the intense network of economic and technological interrelations which gives rise to great flow of merchandise, capital, technological products, services, and specialists of all types, interlacing all the regions of the planet in a permanent flux.

All of these changes, internal and international, are affecting the forms of organization of our society, in the definition of its demands and priorities, as well as in its forms of political participation. The line between international and national affairs is rapidly fading. Mexico, like other countries, is faced with the necessity of redistributing the functions of the State and of the government toward two apparently contrasting domains: the great forums of international participation and the very heart of our national communities.

At center stage, as a necessary and inseparable element of Mexico's modernization project, is the subject of environment and sustainable development.

#### 1.1 The environmental section

In the last few years, Mexico has experienced important strengthening of the legal and institutional framework for environmental protection and the preservation of natural resources. In this process, not only has the conscientiousness of Mexican society played an important part on the magnitude and impact of environmental problems, but so have the powerful international tendencies that characterize this end of the century.

In 1971, the first Environmental Protection Act was decreed, and the Subsecretariat of Environmental improvement was created, as part of the Health Sector; and since then, society and government have tried to respond to the processes of environmental damage. In 1972 the Stockholm Conference on the Human Environment was the catalyst for world interest in ecological issues, and Mexico was no exception. Nevertheless, in the seventies, environmental policy was circumscribed to the focus on public health and incipient efforts in urban and forest planning carried out by the Secretariat of Human Settlements and Public Works and the Secretariat of Agriculture and Hydraulic Resources.

It wasn't until 1982, with the creation of the Secretariat of Urban Development and Ecology, and with a new Federal Act of Environmental Protection, that the responsibilities were consolidated and a more ambitious and more comprehensive policy focus was adopted. In 1988, the General Act of Ecological Equilibrium and Environmental Protection systematized discourse, explicitly linking environment to the issue of development, distributing competency among the three levels of government and society, and setting down important instruments of ecological policy, including environmental impact assessments, ecological land use planning, natural protected areas, technical norms, ecological planning, and ecological criteria in development promotion.

The promulgation of this Act was followed by state laws and regulations on evaluation of environmental damage, prevention and control of air pollution and industrial waste. This normative body was considered in the Human Settlements Act, the Forest Act, and the Planning Act, which include different sectorial environmental protection programs.

The 1992 Federal Law of Metrology and Normalization perfected Mexico's normative model. To date, 81 OMNs (Official Mexican Norms) have been issued, on discharge of residual waters, management of hazardous and municipal wastes, automotive vehicles, industrial sources, and natural resources. The Official Mexican Norms have proven to be a valuable instrument for controlling productive processes, as well as for introducing technological innovation and promoting an important environmental market.

The creation of the National Institute of Ecology in 1992 and the Office of the Federal Attorney for Environmental Protection strengthened ecological normativity and the mechanisms for strict application of the law. More recently, on December 29, 1994, the Secretariat of the Environment, Natural Resources and Fishing (SEMARNAP) was created which has permitted the integration of strategic areas of the productive sector, including fishing, forests and water to environmental conduct. The most important lines of actions of this Secretariat are:

- Promoting the transition to sustainable development and curbing processes of environmental deterioration.
- Planning the use of resources, production, infrastructure and urban development.
- Promoting patterns of consumption more favorable to sustainability.
- Promoting social participation and timely and transparent information on environmental policy and natural resources.
- Advancement in decentralization, coordination and regional integration.
- Strengthening legal framework and compliance with laws, norms and programs.
- Strengthening Mexico's participation in international forums on environment and natural resources.

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## 2 THE REFORM OF THE MEXICAN STATE

In recent years, Mexico has begun an intense process of transformation of its institutional structures. Special attention has been given, in this sense, to the transformation of the political philosophy of the Mexican State. The first premise established the need to abandon the idea of a patrimonialist State with practically absolute attributions. In its place, is a model of the State that transfers increased faculties and responsibilities to society, that promotes growing participation of the private sector in the economy, and that more closely observes the principles of the federal government, transferring to states and municipalities increased faculties for the administration of public affairs.

In the economic aspect, the reform of the State has meant the privatization of non-strategic state enterprises; the opening of domestic markets, the establishment of new relations of agricultural production and new rules for foreign investment.

The political reform has contemplated perfecting the electoral system through important reforms designed to increase impartiality, transparency and legality; the strengthening of political pluralism; a new relationship between State and church, defense of Human Rights and modernization and democratization of political parties.

The administrative reform, in turn, contemplates adapting the bureaucratic apparatus to the new political philosophy of the State, by modifying the size of the administration and transferring greater resources to bureaucratic agencies that attend to social and environmental demands. This has implied the decentralization of functions, administrative deregulation and simplification and reform of the corresponding legal framework.

In the area of social reforms, efforts to promote a new relation between the State and society, particularly with new actors, is outstanding. Other changes include modernization of the educational system and teaching programs; promotion of measures of ecological protection and environmental improvement; greater attention to the development of Public Health, and guidelines for actions to improve the judicial system.

All of these transformations are currently taking place against a backdrop of unprecedented economic crisis, making stricter rationality of public spending an obligation. In spite of this, federal authorities have not renounced the scrupulous application of the law.

## 3 LAW ENFORCEMENT AND VOLUNTARY COMPLIANCE

One of the responsibilities in the area of environmental legislation especially important to the Mexican Federal Government, is the strengthening and enforcement of environmental law. Through laws, regulations and official Mexican norms, among other instruments, a normative body has been configured to clarify environment-related goals, and which constitutes society's main reference point of guidance for those activities which affect the environment and natural resources.

In this context, we propose to orient the activity of the application of the law in three directions:

### 3.1 Broadening actions covered by inspection and enforcement

Broadening actions covered by inspection and enforcement is especially urgent in the area of natural resources. While the universe of industrial activities is reasonably well-covered by the thousands of monthly visits carried out, in the case of enforcement in fishing and forest activities, flora and fauna, serious limitations exist. It should be pointed out that from the beginning

of President Zedillo's administration, these functions (which previously had been dispersed among various federal agencies) have been concentrated in the Office of the Federal Attorney for Environmental Protection (PROFEPA), a decentralized agency of the Secretariat of the Environment, Natural Resources, and Fishing (SEMARNAP). Nevertheless, the natural and financial resources available are exceedingly scarce, and it will be necessary to implement a program of institutional development to provide an increase in the presence of public power, at least in regions where the depredation or excessive use of natural resources is having the most serious effects. One of the fundamental requirements to achieve this goal is the possibility of dedicating an important part of fines imposed to support inspection and enforcement programs.

### 3.2 Achieving defined environmental objectives

A quantitative increase in the actions of inspection and enforcement will not suffice. We must channel our efforts so that the coercive action of the State is not directed solely toward punitive intent, but also toward the goal of achieving environmental objectives, as well as the conservation of natural resources as stated in the normativity. This strategy takes on different tones, depending on whether the subject in question is industry or natural resources.

In the case of industry, over forty seven thousand inspection visits made by the Office of the Federal Attorney for Environmental Protection (PROFEPA) since 1992 provide an important quantity of information on levels of compliance with environmental normativity and most common violations. For this reason a national system of indicators of compliance with environmental legislation has been set up, consisting of a data base with all the information relative to detected irregularities. Not only will this provide the most precise diagnosis possible, but will also orient programming of inspection visits according to clearly defined goals for improvement in environmental acceptability.

In the case of natural resources, the lack of systematized information on illicit activities in fishing, logging and trafficking of species demonstrates the need to increase our knowledge of these problems. To that end, an agreement has been made with the National Council of Science and Technology (CONACYT) to begin a program of research on compliance with environmental and natural resource legislation, with an annual budget of over \$700,000 US, to finance studies by specialized research centers. Our information on compliance with the law in this country is so poor that first it will be necessary to motivate the formation of an academic community dedicated to this subject.

In addition control of natural resources should be modernized by new technologies including systems of geographic information, instruments of global positioning, satellite images, and others to permit the identification of those illicit activities causing the most damage, which must be ceased urgently.

### 3.3 Broadening social participation

It is clear that environmental legislation cannot be successful if it depends solely on government action. In any successful institutional arrangement, coercive actions are the exception, in the context that social actors comply with the law voluntarily. For this, it is necessary to broaden the forums for society's participation in diverse aspects of environmental legislation, which constitutes the third important objective of the authority entrusted with the application of the law. To achieve this, four courses of action come to mind;

- Increase accountability of the public power in relation to society. The most important step in this direction refers to the right of every person to have access to environmental information in government hands. Current reforms to environmental legislation represent unprecedented progress in this aspect, since the right to information is broadened to every person (and not only those directly affected), and precise legal mechanisms are established to enforce this right.
- Create forums where local authorities, citizens and social organizations can meet with federal authorities entrusted with protecting natural resources. To this end, combination 12 of the inspection and enforcement committees have been organized in 31 states of the Republic, where the most important social actors on a local level meet to work with the Office of the Federal Attorney for Environmental Protection (PROFEPA) on fishing, forest and wild flora and fauna trafficking prevention. These committees mark the beginning of a new relationship between federal inspectors and the local communities in which they operate, for the purpose of articulating the community's support for the application of the law.
- Promote the development of forms of voluntary compliance with the law. Among these the most important is the environmental audit, originally included in the parallel agreement to NAFTA on environment and which will soon be incorporated into Mexican environmental legislation. To date, over 400 audits have been carried out, in order to define, based on exhaustive diagnostic tests, those actions which should be taken to comply not only with current norms, but also with international norms and sound engineering practices in those areas where official Mexican norms do not yet exist. Also, the term for carrying out said actions will be defined, under strict supervision by the Office of the Federal Attorney for Environmental Protection (PROFEPA). Perhaps the most relevant case are the audits carried out in all the refineries and petrochemical plants of state enterprise Petroleos Mexicanos (PEMEX), which call for an investment of approximately 660 million dollars to improve environmental performance, within a period of three years. In the future, the incorporation of small and medium-scale industry will be promoted.
- Encourage the participation of academic institutions and research on attention to environmental problems and emergencies, such as attention to wildlife, to be coordinated with corresponding authorities. In this context, the need to commit these institutions, not only to research, but also to the development of mechanisms for immediate response to these emergencies, becomes apparent. One example of this potential was offered by the Scientific-Technical Committee established by the Office of the Federal Attorney for Environmental Protection (PROFEPA) last year, with more than 19 institutions, to study the cause of mortality of birds which occurred in the Silva reservoir.

#### 4 THE REFORM OF ENVIRONMENTAL LEGISLATION

Today, the General Act of Ecological Equilibrium and Environmental Protection is undergoing a process of reform in order to introduce new norms and procedures.

It should be pointed out that the reforms proposal has been presented and discussed in multiple forums with social and academic organizations, groups of specialized attorneys' business organizations and different government agencies.

The proposal calls for decentralization of functions which affect, in the first place, local communities, and in which local authorities should have increased participation. In Article 12, the proposal establishes precise mechanisms with definite formalities for the transference of functions from the federal government to state governments.

The objective is to create a more precise definition of the areas of competence of each of the three levels of government, and to reduce to a minimum the discretionary power in each area, thus offering increased legal security in favor of those governed. The decentralization program included in the proposal will not go into effect immediately, but under a uniform policy under which application will be gradual, in keeping with state and municipal diversity. To this end the ideal instruments are the agreements provided for by Constitutional Article 116 for the transfer of functions from the Federal government to the States.

Another important characteristic of the proposal is the broadening of opportunities for social input on environmental issues. It provides for increased participation in the process of environmental impact assessment, granting the right to all citizens to formulate observations and proposals regarding projects or activities subject to evaluation and establishes procedures during which, at the request of any citizen, the Secretariat of the Environment, Natural Resources and Fishing (SEMARNAP) will organize a public hearing for the sponsor of a project to provide an explanation to the public. The authority shall provide reasons for its decision, in relation to the proposals presented by citizens in reference to a given project.

Also, for the first time, rules will be established for participation in ecological land-use planning (or ordenamiento ecologico del territorio), which will give communities over three months to pronounce on projects.

With respect to natural protected areas (NPAs), not only does the proposal maintain the principle of social participation in their establishment and maintenance, set forth in Article 47 of the current Law, but also specifies that participation should include proprietors and owners of same, as well as local governments, indigenous communities, social organizations and groups, universities, academic institutions, and other organizations, and calls for the constitution of the National Council of Natural Protected Areas, for the purpose of participating in the elaboration, supervision and follow-up of policies for the establishment, administration, and supervision of natural protected areas. The new wording places special emphasis on the participation of indigenous communities

The proposal incorporates, for the first time in Mexico's environmental legislation, the right to information, which is established not only in general terms, but it also specifies its content and provides for legal procedures to insure its implementation. Along with a definition of what should be considered environmental information, Articles 150-3 and 159-6 grant every person the right to access to information from environmental authorities from the three levels of government. Exceptions to this right protect legitimate interests - private as well as public - established by other legal regulations, which would be affected by the release of certain information. Evidently, discussion as to whether this is sufficient could be unending. Nowhere, it should be noted that said exceptions correspond to those established by the most recent legislation in the European Union.

As far as ecological land use planning, the proposal calls for this to be legally binding, unlike the current situation similar to land use plans for urban development established in the legislation on human settlements.

With respect to the Environmental Impact Assessment (EIA), the proposal's aim is to set forth guidelines for a more specific definition of projects and activities which should be subject to said procedure. Such is the case of polyducts, forest exploitation, forest plantations, land use changes of forest areas, fishing, agriculture and livestock, industrial parks, real estate developments that might affect coastal ecosystems, as well as projects in marshlands, lagoons, rivers, lakes and estuaries leading to the sea, as well as littoral or federal zones.

Instead of reducing levels of environmental protection, what is reduced by establishing an exhaustive list of projects and activities subject to environmental impact assessments (EIA), is the discretionary power of authorities to decide when the presentation of an assessment is required. In order to draw the line between projects that do require an assessment and those that do not, there are only two choices. The first is to establish in the environmental legislation a generic formula, whose interpretation and application will rely on the judgment of authorities as current law, and the second is to establish this definition in a secondary ordinance (a reglamento) which describes in detail those projects which, because of their size, location or characteristics, would or would not be subject to the procedure. The proposal includes the second alternative, in order to reduce discretionary power.

The proposal does not aim to replace preventive actions with corrective ones. The proposal incorporates the polluters-pay-principle, that should be observed in the formulation and application of environmental policy. To include a new principle in no way means abandoning norms that establish preventive policies. This could only be affirmed if the preventive provisions were revoked. In fact, the proposal's emphasis on the latter can be observed in the inclusion for self-regulation and environmental audits as instruments of environmental policy, as well as new provisions to protect the country's genetic capital and specifically, to regulate biotechnological activities, which are currently not subject to control.

None of the provisions incorporated prevents compliance with the international treaties and conventions of which our country forms part. On the contrary, international obligations will be part of the amendments to the law, in accordance with Article 133 of the Mexican Constitution, which states that all international treaties, once approved by the Senate, will become "supreme law of the nation".

Finally, it should be stressed that work is still being done on the proposal, which could be subject to revision before going to Congress for discussion.

## **5 INTERNATIONAL PRESENCE IN THE APPLICATION OF THE LAW**

### **5.1. The North American setting**

The intense international environmental activity in which Mexico has participated cannot solely explain the indisputable impact of external factors in the application of the law and voluntary compliance in Mexico. We must also carefully consider our relationship with the United States, the structural character being acquired by some of its elements, and the influences and distortions produced internally in our country due to our proximity, both in the application of the law and in our agenda of environmental themes

The broadening of economic ties between the countries and growing trade in the region have generated increased interrelation of Mexico with foreign markets, and with all types of conditions imposed. In this context, the environmental element presents itself with a double dimension: as a conditioning actor in the productive processes and as a powerful instrument of unilateral commercial competition.

To the latter we would have to include the influence of U.S. environmental rights, which in some cases has given rise to the adoption of mechanisms in Mexican law such as the environmental impact assessment<sup>1</sup>, as well as a for comparing technical levels to determine sources of air and water pollution, including toxic substances and hazardous waste management; a process which may not yet have reached the level of homologation of standards, but which has influenced national debate on environmental standards and legislation.

On the other hand, the distortion effect this influence has with some frequency on Mexico's environmental agenda should be mentioned. The fact that a differentiated perspective exists between both nations as far as Mexican environmental priorities is indisputable. The result is the overestimation of some Mexican environmental problems by some U. S. sectors, as well as the underestimation of social and economic priorities that have considerable weight in the attention Mexico gives to its environmental problems.

## 5.2 The North American Free Trade Agreement (NAFTA) environmental system

The North American Free Trade Agreement contributed to the concrete conformation of what could be called a system of regional environmental instances that greatly influences national attention given to environmental problems in Mexico.

When the Mexican Senate approved NAFTA on November 1 B, 1993, that Treaty and the Parallel Agreements became supreme law in Mexico, as established by our constitution. In this manner, new environmental and ecological commitments, as well as commercial commitments, were integrated into our legal structure.

In this sense, both paragraphs of Art. 1114 of NAFTA deserve special attention. The first establishes that the Parties will be able to adopt measures to insure that investments in their territory will keep environmental disquietudes in mind; and the second recognizes the inadequacy of promoting investment through relaxed internal measures related to the environment, and consultation is envisioned when one Party believes the other Party to have promoted investment through the denouncement or reduction of application of environmental measures.<sup>2</sup>

It is also worth mentioning that Art. 104, on the relation between NAFTA and other agreements on environmental and conservation issues, establishes that in the case of incompatibility between NAFTA and specific commercial obligations contained in instruments including CITES (Convention on International Trade of Endangered Species), the Montreal Protocol on the ozone layer, or the Basilea Agreement on transborder movements, the latter will prevail over NAFTA.<sup>3</sup>

Two pillars of the system of regional environmental instances are the North American Commission for Environmental Cooperation (NACEC), consisting of Mexico, United States and Canada, headquarters in Montreal; and the Border Environmental Cooperation Commission (BECC), between Mexico and the United States, with headquarters in Ciudad Juarez.

The negotiations on the Environmental Cooperation Agreement, together with its parallel labor agreement, concluded on August 12, 1993. The introduction of these negotiations when negotiations had already concluded on NAFTA represented an indisputable political

element. Nevertheless, that is no reason for regional environmental cooperation to cease being an expression of what Gabriel Quadri deems "the interests of modern societies in environmental issues."

The supreme organ of the Environmental Cooperation Commission is the Council, formed by the three environmental ministers from member countries. The executive area is headed by a Secretariat, chaired over by an Executive Director. The advising body is the Joint Public Advisory Council (JPAC), composed of 15 members, five from each country.

The fundamental objectives of the NACEC are: to encourage protection and improvement of the environmental; promote sustainable development based on cooperation; support environmental goals of NAFTA; improve environmental laws and practices; promote society's input on environmental policies, and prevent pollution.

Also, the Agreement that established the Border Ecological Cooperation Commission (BECC) and the American Development Bank (NADBANK) was signed on November 16, 1993. Their vinculum to the aforementioned instruments is shown in the points considered, the last of which establishes the will to "*promote the goals and objectives of the North American Free Trade Agreement... and the North American Agreement of Environmental Cooperation...*"

The main objectives of the Commission are: to provide technical and financial planning assistance to ecological infrastructure projects presented in the border zone. Said projects should comply with those technical, financial and environmental the Commission decides to apply, as well as with environmental legislation and other legal provisions of the area in which they are located.

The works of the Commission are closely related to those of the Development Bank of North America, since one of the latter principal functions is to finance environmental infrastructure projects certified by the Commission. It can also promote and complement private investment in said projects.

The Border Ecological Cooperation Commission is headed by a Board of Directors made up of ten directors (five from each country). In addition, it has an Advisory Council made up of 18 members (nine from each country), who represent the state and municipal authorities from all the border states, as well as community members from the region and nongovernment organizations.

The system formed by both commissions is becoming consolidated as a group of regional environmental forums whose interrelation and influence is indisputable. In the case of Mexico, there are two central aspects to this influence: first as generators or sponsors of environmental projects, and second as mechanisms to provide follow-up to environmental problems and techniques of application of the law in Mexico.

One of the most outstanding characteristics of the Commission is the process of consultations for the certification of environmental projects. Participants in the forums include representatives from communities in the region, state or municipal authorities, nongovernmental organizations, and academic, scientific or intellectual personalities. One of the main objectives of public participation is to determine whether the projects proposed for certification comply with selection criteria established by the Commission, which were also designed through public participation.

Seven public sessions of the Directive Council have been held, as well as more than twenty informative sessions in different localities along the border of both countries.

We must point out, in this context, the dynamic developing around environmental issues in the border zone between Mexico and the United States. In addition to the Border Ecological Cooperation Commission, also active in the region are work groups established by the La

Paz Agreement of 1983 between the two neighboring countries and Border XXI currently in development, and which will integrate the contributions of all national and international organizations in charge of environmental actions.

Although not directly linked, other forums in the region have been opened to the North American Commission for Environmental Cooperation (NACEC), whose work programs include some related to the protection of natural resources and attention to the trafficking of hazardous waste along the borders of Canada-United States and United States-Mexico.

Undoubtedly, environmental actions in the border region in the north of Mexico must be followed very closely, since the area will undoubtedly provide very significant experiences, not only for those nations directly affected, but also, in a broader scope, for environmental cooperation between industrialized nations and developing countries.

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**THEME #2:**

**PRINCIPLES OF ENVIRONMENTAL  
COMPLIANCE AND ENFORCEMENT**

Theme 2 papers cover:

- Defining Compliance and Enforcement
  - The need to consider compliance and enforcement at every stage in the development and implementation of environmental laws and programs.
  - The philosophy of compliance, enforcement theories, and whether and how culture makes a difference.
  
- General Framework for Compliance and Enforcement
  - designing enforceable requirements;
  - identifying the regulated universe and setting priorities;
  - promoting compliance through enforceable requirements, technical assistance, and outreach;
  - monitoring compliance;
  - establishing and using enforcement authorities.
  - defining intergovernmental roles; and
  - establishing accountability and measuring results.

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1. Building International Networks, Cooperation, and Capacity for Environmental Compliance and Enforcement: A Progress Report, *C. Wasserman* ..... 97
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See related papers from other International Workshop and Conference Proceedings:

1. The Principles of Environmental Enforcement and Beyond: Building Institutional Capacity, *C. Wasserman*, Volume I, Oaxaca, México
2. Principles of Environmental Enforcement, *C. Wasserman*, Volume I, Budapest, Hungary

3. Developed for Conference use in conjunction with alternative workshop topics for the Principles of Environmental Enforcement training courses are stand alone technical support documents which summarize the environmental problems, pollution prevention and control alternatives, selected institutional approaches and an annotated bibliography on the topics of:

- Mining (metallics and minerals)
- Petroleum refining and petrochemicals
- Residential and industrial waste (solid) disposal
- Tourism
- Deforestation
- Transboundary Illegal Shipments of Hazardous Waste, Toxic Chemicals (Pesticide), Contraband CFC

These technical support documents are available on request from the editors.

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## **BUILDING INTERNATIONAL NETWORKS, COOPERATION, AND CAPACITY FOR ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT: A PROGRESS REPORT**

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### **SUMMARY**

An international collaboration to build effective environmental compliance and enforcement programs is leaving a lasting legacy through a series of biennial international conferences, development of international workshops, published proceedings and studies, and support for ongoing networking and cooperation. The Fourth International Conference on Environmental Compliance and Enforcement to be held in Chiang Mai, Thailand, April, 1996, is significant both as an event and as demarcation of the progress that has been made in a little over a decade, including: 1) an international mandate and consensus on the importance of dedicated programs for environmental compliance and enforcement to the achievement of domestic and international environmental goals, sustainable development and free trade; 2) adoption of common definitions, principles and a framework for international exchange; 3) development of 12 international workshops, 6 technical and 6 capacity building support documents; 4) exchange of experiences of well over 65 country programs and expert views on over 25 special topics in widely disseminated conference proceedings; 5) exponential growth in networking supported by an accessible databank and years of research reflected in over 200 governmental and nongovernmental officials from 100 countries and international organizations invited and confirmed to attend the Fourth International Conference; and 6) emergence of new institutional arrangements for ongoing regional and international networking and cooperation.

This paper provides a brief overview of the importance of building capacity for environmental compliance and enforcement program success; what this international partnership has been able to achieve and what might be needed to continue this progress into the next century.

### **1 INTRODUCTION**

The series of four biennial international conferences on environmental compliance and enforcement has given a voice to what has for too long been the silent and difficult task of getting compliance with and enforcing environmental requirements. Achieving real results and changing behavior to meet environmental requirements is a daunting task. Serious threats to public health and the environment (e.g. from unhealthy air, unsafe drinking water, discharges of raw or partially treated sewage into our waterways, dumping of hazardous and toxic chemicals onto our land and into our waters, flooding from unchecked deforestation and unauthorized land management practices, loss of habitat, ecosystems, and biodiversity, and/or release of ozone depleting substances), continue unabated unless this job is done

and done well, and yet how to achieve compliance with environmental requirements is often ignored until well after problems are identified and laws or international agreements have been put in place. Overcoming obvious challenges and barriers to compliance is not a job for the faint hearted (See Figure A1-3). Nor is this job for those who would go charging at the problem without sound technical support or strategic sense, actions which have resulted in opposite and equal reactions, creating political backlash rather than support. Effective environmental compliance and enforcement requires the doggedness of a good journalist, the finesse of a statesman, and the understanding of a psychologist to meld together a balanced program which addresses the range of motivations and obstacles to get people and institutions to comply. While monitoring compliance and taking legal enforcement response to impose legal sanctions and consequences for violators is at the heart of any compliance and enforcement program, there is much more involved.

Networking has proved to be a powerful force internationally to help design and implement more effective compliance and enforcement programs. Ironically, while laws and cultures are so very different that many now seek harmonization and simplification, the elements of environmental compliance and enforcement strategy have resonated to common principles and frameworks which have human nature at their core. These common human threads have transcended the potential barriers to networking among governmental and nongovernmental officials from 117 countries and international organizations coming together over the course of a decade and learning from each other.

The multinational commitment to capacity building, networking, and cooperation has few parallels. A bilateral exchange between the United States' Environmental Protection Agency (U.S. EPA) and the Netherlands' Ministry of Housing, Spatial Planning and the Environment (VROM) in 1985 under a Memorandum of Understanding led to the First International Enforcement Workshop in Utrecht, the Netherlands in 1990. Since then, the Netherlands' Inspector General for the Environment and U.S. EPA's Assistant Administrator for Enforcement and Compliance Assurance continue to provide leadership, co-chairing and staffing the Executive Planning Committees for the conferences. The Executive Planning Committee and conference sponsors have steadily expanded. By the time of the second International Conference on Environmental Enforcement held in Budapest, Hungary, September, 1992, sponsorship had already expanded to include the European Commission, along with the gracious support from Hungary as host country. The Executive Planning Committee also included the United Nations Environment Program's Industry and Environment center (UNEP I/E), the Regional Environmental Center in Budapest, the governments of Poland, Hungary and what was then the Czech and Slovak Federated Republic (now two independent Republics) and the World Wildlife Fund, involving NGO's for the first time. The Third International Conference held in Oaxaca, Mexico, in April 1994, expanded its sponsorship further to include UNEP I/E as a full sponsor, the World Wildlife Fund (WWF) and Mexico's SEDESOL (now PROFEPA). The Executive Planning Committee included the sponsors plus Canada, Costa Rica, Chile, Venezuela, Jamaica, Nigeria, and Indonesia. The location of the Conference in Mexico highlighted the importance of reaching not only industrialized economies, and those in transition, but also those with developing economies.

The Fourth International Conference sponsors include not only VROM, U.S. EPA, and UNEP UNEP/I/E serving as the three anchors, but also Thailand's Pollution Control Department, Environment Canada, the European Commission and the Environmental Law Institute, U.S. The Executive Planning Committee includes UNEP's Environmental Law Center, the United Nations Development Program (UNDP), the WWF, Canada, Mexico, Chile, Poland, Hungary, the United Kingdom, Nigeria, Egypt, South Africa, Thailand, Malaysia,

the Philippines, and the People's Republic of China. The location of the Conference in Asia adds new focus on countries with rapidly industrializing economies to those of industrialized, transitional, and developing economies highlighted at prior conferences.

In partnership, an international collaboration has been able to achieve what few if any countries or international institutions could achieve alone. The Executive Planning Committees for the succession of four international conferences have come to perform a role analogous to that of an Executive Board of Directors, guiding and catalyzing international capacity building efforts. The exchanges, networks, and cooperation have strengthened individual country programs, created the base of experience to support international and country commitments to environmental compliance and enforcement programs, put newly developing programs on a fast learning curve, and accelerated evaluation and learning from what works and does not for those wishing to enhance existing programs. Figure 1 is a telling portrait of this progress.

Since 1990, and every two years since, the number of countries and international organizations participating in the international conferences has doubled from Utrecht to Budapest, and from Oaxaca to Chiang Mai. We have shifted our locations to build a stronger regional as well as international networking capacity from Western Europe, to Central and Eastern Europe, to Latin America, and now Asia. Another shift was the presence, at the Budapest Conference and thereafter of nongovernmental organizations, both citizen groups and international industry organizations. Exponential growth in the numbers and representation of governmental and nongovernmental officials participating in the Conferences is directly related to the contacts and relationships established at previous conferences. All participants are personally invited based upon their ability to influence the design or enhancement of environmental compliance and enforcement programs.

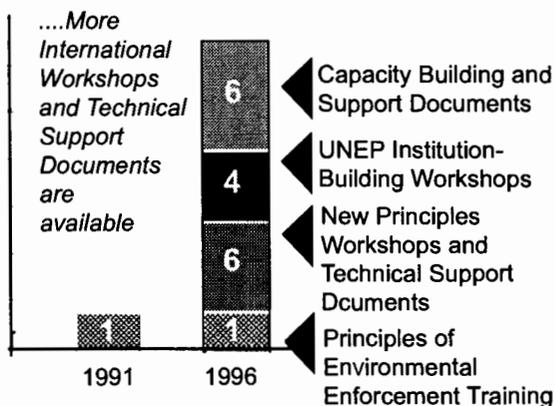
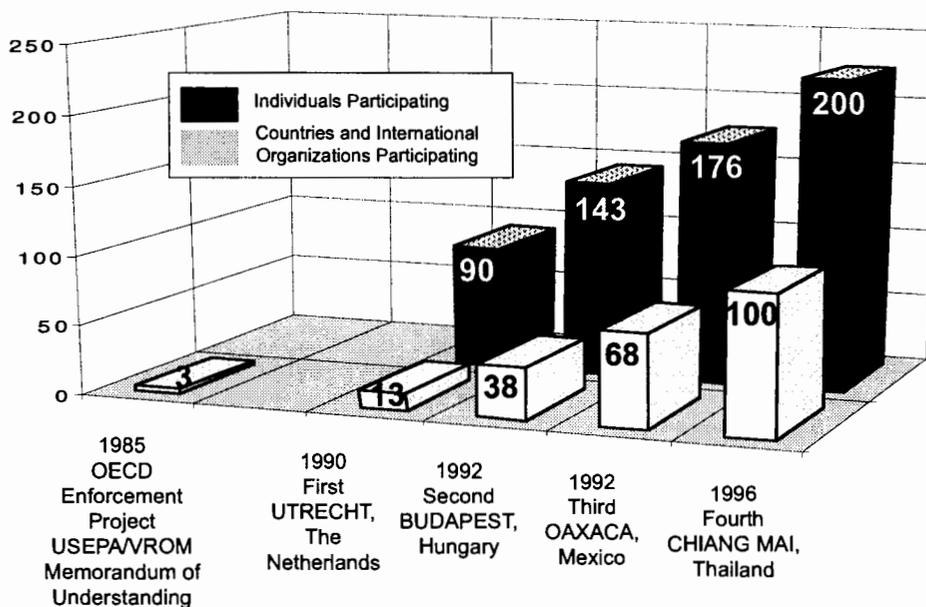
The development of improved environmental compliance and enforcement programs can be traced like stepping stones from one exchange to the next, each country and international organization benefitting from the experiences of the others, offering their own unique contribution to successes around the world.

## **2 INTERNATIONAL CONSENSUS ON THE IMPORTANCE OF ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT PROGRAMS, NETWORKING AND COOPERATION**

Heightened global activity to advance environmental compliance and enforcement programs derives from four basic concerns: 1) a concern for environmental quality and protection of public health; 2) a concern for economic prosperity; 3) a concern about fairness; and 4) a concern for the credibility of our laws and institutions. (See Annex 1, figure 2). Over the past ten years, it is clear that successful environmental compliance and enforcement of environmental law are essential to achievement of domestic and international environmental goals, cleaner production, sustainable development and international free trade. Together with public demand for environmental accountability, these concerns are in turn driving enhancement of environmental enforcement. Concerns about pollution havens, economic pressure to reduce environmental protections, potential erosion of environmental quality in countries where institutions were not sufficiently developed to address environmental issues have been central to the debates not only on the North American Free Trade Agreement (NAFTA) among Canada, the United States and Mexico, but also within the European

## Building International Environmental Compliance and Enforcement Networks

*International Conferences Leave  
A Growing Legacy*

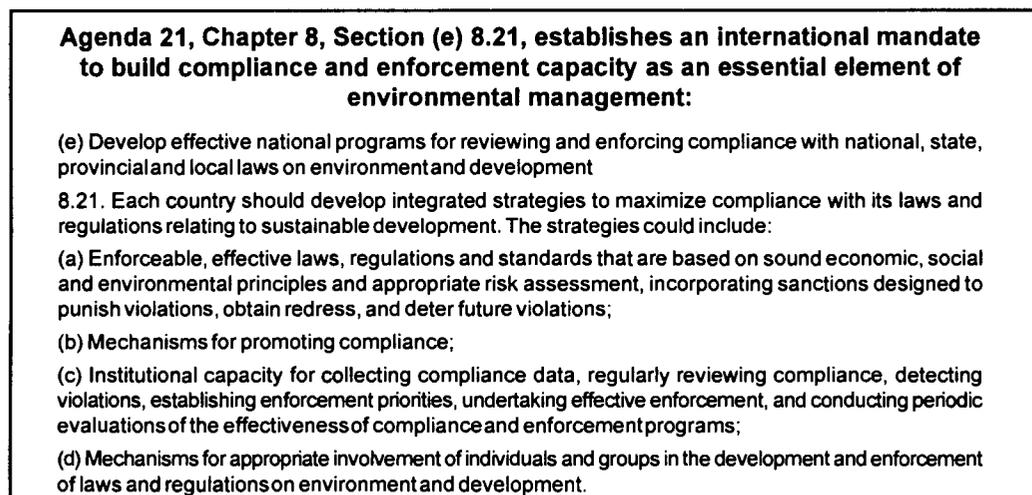


Community and within the Asia-Pacific region as well. Clear signals are being sent that those countries wanting to engage in free trade, need to meet some minimum level of competency in establishing environmental standards and ensuring compliance with them.

### **3 ACCOMPLISHMENTS OF INTERNATIONAL CONFERENCES AND RELATED NETWORKING**

#### **3.1 International mandate for environmental compliance and enforcement programs**

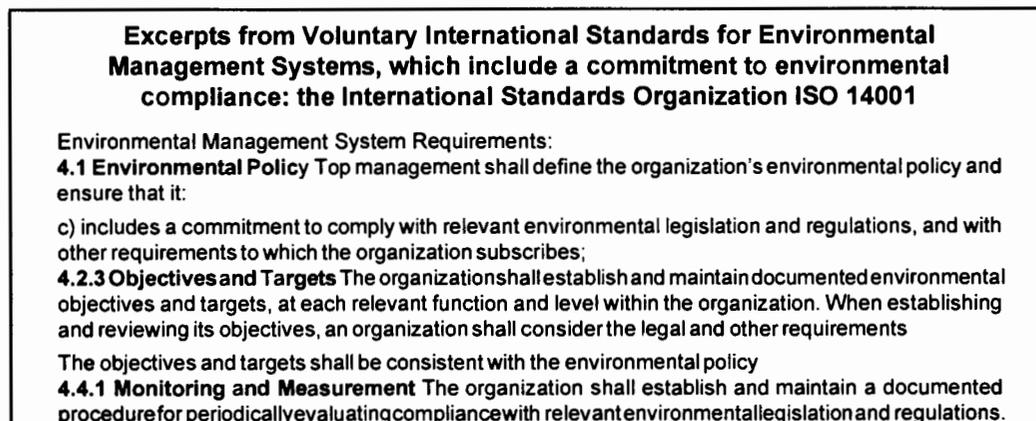
One of the most important outcomes of the first International Enforcement Workshop in 1990 was the participant recommendation that enforcement appear on the agenda at the United Nations Conference on Environment and Development (UNCED), planned for Rio de Janeiro, Brazil in 1992. Although enforcement was not specifically a topic at the UNCED, a more significant result emerged in Agenda 21, Chapter 8, Section (e) 8.21. This established an international mandate to build compliance, compliance monitoring and enforcement capacity as an essential element of environmental management, starting with ensuring that laws and regulations be enforceable. Language in Agenda 21 also empowered UN organizations to more actively support compliance and enforcement institution building activities. Public accountability provided by such governmental compliance and enforcement programs was undergirded by support for a strong public role in decision making throughout Agenda 21. (See Figure 2).



**Figure 2. Agenda 21 Language on Environmental Compliance and Enforcement.**

Of perhaps equal significance are related voluntary initiatives by the business community to support compliance with environmental requirements. At the UNCED, organizations such as the International Chamber of Commerce and the Business Council for Sustainable Development presented consensus statements on the need for more effective environmental management. Indeed, the International Standards Organization's international

standards on environmental management systems, ISO 14001, are predicated on a commitment from top management to both environmental compliance and prevention of pollution. (See Figure 3).



**Figure 3. Excerpts From Voluntary International Standards for Environmental Management Systems**

### 3.2 Principles and frameworks for international exchange

A common international framework, definitions and principles for international exchange now provide a basis for international exchange after being introduced at the Second International Conference in Budapest, Hungary in 1992 with this purpose in mind. These principles emerged from the first International Enforcement Workshop held in Utrecht, the Netherlands, May 1990, based upon principles and frameworks used to describe the U.S. program. Participants recognized a common need to change human behavior to get results intended by environmental requirements that transcended differences in laws, customs, and legal systems. These frameworks were originally developed to better articulate a consistent philosophy and approach to inspire improved enforcement among the 50 states and numerous local government entities in the U.S. after a two-year decline in enforcement. At the beginning of 1991, Poland's Ministry of Environmental Protection, Natural Resources, and Forestry, represented at the first International Enforcement Workshop requested enforcement training and provided a unique opportunity to take these principles and frameworks out of a U.S. context, and to develop them for international use. Drawing on international experiences shared at the first international workshop, the text and course were developed to offer a rich menu of options for ways to develop programs. The "Principles of Environmental Enforcement" text and associated training exercises, role-playing and case-study materials were developed by U.S. EPA in cooperation with both Poland's Environment Ministry and the Netherlands's environment inspectorate (VROM) for enforcement training with broad international applicability. The Principles of Environmental Enforcement Training has now been offered in over 13 countries and translated into 9 languages.<sup>3</sup> The definitions, principles and framework are summarized in Annex 1 to this paper and the course is described more fully in Annex 2.

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The framework covers seven elements:

- 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.

The Executive Planning Committees for the Third and Fourth International Conferences included a one-day version of the training at the Conferences to provide a common basis for discussions. To ensure wider applicability, new case study subject areas were commissioned to augment the original case study concerned with air pollution from coal as an energy source and use in the coking process for steel fabrication. The new topics included mining, petroleum refining and petrochemicals, residential and industrial waste disposal, tourism, deforestation and transboundary illegal shipments. The broader subject matter of the new Principles of Environmental Enforcement workshops did much to blur some of the sharp lines dividing green and brown issues within the environmental community. It demonstrated a common framework within which one could learn from each other, whether the concern involves tourism and forest management or industrial and municipal pollution. Six stand-alone technical support documents for each of these new subject areas provide an overview of the kinds of environmental problems, pollution prevention and control options that are available to both address the public outreach issue and to enable officials throughout the world to begin tapping into the expertise available to address these problems. (See Figure 4.)

The problems portrayed in the fictitious case studies at the Third International Conference were echoed by real life examples described in the papers in the Fourth Conference Proceedings. These include papers from Barbados which mirror the tourism case study and technical support document, the paper from Guyana on compliance and enforcement problems, which mirrors the mining case study and support document, the experiences of Nigeria, China and the Netherlands in transboundary illegal shipments of hazardous waste, and the Dominican Republic in addressing deforestation.

### 3.3 Development of international workshops, technical and capacity building support documents

The Principles of Environmental Enforcement International Training was followed by a second and complementary set of training modules and workshop materials. In 1992, UNEP published "From Regulations to Industry Compliance: Building Institutional Capabilities". The report, two years in the making, was designed to provide government officials and other concerned actors with guidance on building institutional capabilities to implement their environmental laws with an integrated approach so that waste and pollutants are not simply transferred between media, e.g. air to water or water to land, but are actually reduced at the source. Ideas and concepts illustrate the importance of legally binding industrial facilities to established environmental standards and to check that they are meeting them. Examples of countries' experiences were selected to show the incremental steps that can be taken with even minimal personnel and resources when there is sufficient political will.

Requests of UNEP from officials in developing countries and transitional economies of East and Central European to help them apply the concepts and integrated approaches outlined in UNEP's publication resulted in the development of UNEP's Institution Building Workshops for Industrial Compliance. The workshops were developed with the Netherlands in cooperation with U.S. EPA with additional members of an Advisory Committee with members from Mexico, France, Egypt, and Poland to ensure the materials are helpful to developing nations and transition economies. A draft Manual and four case studies with facilitation materials were piloted at the Third International Conference on Environmental Enforcement, picking up where the Principles of Environmental Enforcement leave off, exploring in four different modules:

- Organization of permitting, compliance monitoring and enforcement programs.
- Human, financial and information resources for the above programs.
- Permitting processes for industrial facilities to enhance compliance.
- Compliance monitoring and enforcement capability.

**International Workshops and Related Technical and Capacity Building Support Documents:**

Principles of Environmental Enforcement International Training Course

- Principles of Environmental Enforcement Text
- Technical Support Documents:
  - Coal burning, iron and steel (first case/no support document);
  - Petroleum refining and petrochemicals;
  - Metallic ore and minerals mining;
  - Residential and industrial (solid) waste disposal;
  - Deforestation;
  - Tourism; and
  - Transboundary illegal shipments of hazardous waste, pesticides and contraband CFC.

UNEP Institution Building Workshops on Industrial Compliance: comprised of 4 Modules

- 1-Organizing permitting, compliance monitoring and enforcement programs, 2- Financing and budgeting resources for compliance and enforcement programs, 3-Enforceable Permitting Processes, 4-Compliance Monitoring and Enforcement

Capacity Building Support documents

- Organizing permitting, compliance monitoring and enforcement programs
- Financing and budgeting resources for compliance and enforcement programs
- Comparative study of source compliance self-monitoring requirements
- Comparative study of multi-media inspection protocols

Communications and Enforcement Workshop

- Communications Strategies for Enforcement

Inspector Training and related technical materials with process and prevention information

- Student text: Conducting Multi-Media Inspections
- Technical Information on Selected Industry Processes
  - Furniture finishing
  - Electroplating
  - Printed circuit boards
  - Wood Preservation
  - Rock Crushing and Cement Production
  - Injection Molding

**Figure 4. International Workshops and Related Technical and Capacity Building Support Documents**

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To reinforce the common basis for international capacity building, the overview to the manual is a summary of the "Principles of Environmental Enforcement."

The Executive Planning Committee for the Fourth International Conference also specifically commissioned several capacity building support documents to enrich the basis for exchange (See Figure 4). These build upon areas identified in the Principles of Environmental Enforcement and UNEP training workshops and other topics of interest at the international conferences. The capacity building support document on organizing programs compares 10 country programs and how they address issues such as the degree of centralization, placement in the hierarchy, degree of consolidation of functions, single or multimedia organization. The support document on financing and budgeting provides information on more than 60 country programs along with key concepts in budgeting and financing. The comparison of source compliance self-monitoring, reporting and record keeping requirements illustrates how over ten different countries leverage scarce inspection resources and ensure the regulated community has sufficient information to achieve compliance through self-monitoring and reporting requirements. It explores how each country considers technical feasibility, cost to medium and small business, and management of the information. The international comparison of multimedia (integrated) inspection protocols should help countries continue to explore the relative advantages and disadvantages of single and multimedia approaches. Finally, a new workshop and capacity building support document are available on communication strategies for enforcement. This is a particularly important topic given the importance of spreading the word about enforcement and gaining the support of an educated and supportive citizenry to make each enforcement action count.

- 3.4 Exchange of experiences of well over 65 country programs and expert views on over 25 special topics in published and widely disseminated conference proceedings

3.4.1 Creating a practical literature on environmental compliance and enforcement

Following each of the International Conferences, Volumes of the Proceedings are widely disseminated to enforcement and environmental officials in virtually every nation around the globe. The Proceedings contain papers by country and special topic experts, opening speeches, results of workshop discussions, conference evaluations and additional papers. These proceedings clearly reflect a realization of several goals of Conference organizers in the increasing number of country experiences profiled, the increasing number of topics around which experiences are summarized, and the increasing sophistication of the papers that are the subject of these communications. Papers are solicited to provide information on the evolution of a program or activity, what works and does not work, factors leading to success or failure, and clarity needed to be understood and potentially serve as a learning experience for others. For the Fourth International Conference in Chiang Mai papers from over 55 countries and international organizations will bring the total from four conferences to well over 67 country programs having been profiled. (See Figure 5.) Through papers and reports by rapporteurs at over 25 special topic workshops, the state of the art in official experiences in that topic is captured (See Figure 6).

<b>Countries and International Organizations with Participants at the International Conferences</b>	
#	Countries and Organizations by Region
17	<u>Africa:</u> Benin, Botswana, Cameroon, Egypt*, Ethiopia, Ghana, Kenya, Malawi, Nigeria*, Senegal*, Sierra Leone, South Africa, Tanzania*, The Gambia, Tunisia, Uganda*, Zimbabwe*
19	<u>Asia:</u> Australia, Bangladesh, Bhutan, Cambodia, Hong Kong*, India, Indonesia*, Japan*, Malaysia, Mongolia, Nepal*, New Zealand*, Pakistan, People's Republic of China*, the Philippines*, Sri Lanka, Taiwan, Thailand*, Vietnam
9	<u>Caribbean:</u> Aruba, Bahamas, Barbados*, Curacao, Dominican Republic*, Jamaica, St. Lucia, St. Maarten, St. Vincent
19	<u>Central and South America:</u> Argentina*, Belize, Bolivia*, Brazil, Chile, Colombia*, Costa Rica*, Ecuador, El Salvador*, Guatemala*, Guyana*, Honduras*, Nicaragua*, Panama, Paraguay, Peru*, Suriname, Uruguay, Venezuela
3	<u>North America:</u> United States*, Canada*, Mexico*
6	<u>West Asia and Middle East:</u> Bahrain, Israel*, Jordan, Kuwait, Oman, United Arab Emirates
12	<u>Western Europe:</u> Austria, Belgium*, Denmark*, Finland, Germany*, Greece, Italy, Norway*, Sweden*, Switzerland, The Netherlands*, United Kingdom*
16	<u>Central and Eastern Europe/ NIS:</u> Albania, Armenia*, Bulgaria*, Croatia, Czech Republic*, Estonia, Hungary*, Kazakhstan, Latvia, Lithuania*, Montenegro, Poland*, Romania*, Russia*, Slovak Republic, Ukraine*
16	<u>International Organizations:</u> Asian Development Bank, Commission of the European Communities*, Environmental Law Institute*, Global Environmental Management Initiative*, Inter-American Development Bank, International Chamber of Commerce*, INTERPOL*, North America Commission for Environmental Cooperation (NACEC), Organization of American States, Organization for Economic Cooperation and Development, Regional Environmental Center*, United Nations Environment Program, I/E*, UNEP ELI, United Nations Development Program*, United Nations Crime Unit*, World Bank*, World Wildlife Fund*
	* Indicates sources of papers in Conference proceedings

**Figure 5. Countries and International Organizations With Participants at the International Conferences**

### 3.4.2 Example conclusions from workshops and theme discussions

- **Challenges to initiating environmental compliance and enforcement programs**

Challenges to environmental enforcement are present whether one is establishing a national environmental enforcement program or enforcing at a regional level, whether starting from scratch or improving the implementation of an existing program. First, a catalyst is needed to break the inertia of inaction about compliance problems. Second, there is a constant search for funding and trained personnel. Third, interagency conflicts and provincial/federal jurisdictional conflicts must be resolved or they will impede progress. Fourth, political instability in particular plagues the advances in many programs. Fifth, creative and even courageous interpretation of laws are often necessary to begin constructive response to environmental problems. Finally, national commitments have to be supported by international cooperation and an involved public.

**Special Topics Addressed at Four International Conferences for which  
Papers and Discussion Summaries are available:**

- Automation and Enforcement: available support systems (4th)
- Strategic targeting for enforcement (4th)
- Strategies, tools and management systems (1st)
- Integrated permitting and enforcement (4th)
- Compliance monitoring (2nd, 4th)
- Role of police in enforcement (3rd)
- Promoting voluntary compliance: environmental auditing, outreach, incentive programs (3rd, 4th)
- Measures of success (1st, 4th)
- Communications and enforcement (2nd, 3rd, 4th)
- Public role in enforcement: How to go about creating and supporting effective citizen enforcement (2nd, 3rd, 4th)
- Criminal enforcement: INTERPOL, role of criminal enforcement (3rd, 4th)
- Enforcement of economic instruments (3rd, 4th)
- Take-back laws enforcement (4th)
- Creating enforceable permit programs and requirements (2nd, 4th)
- General, hazardous and solid waste (2nd)
- Focus on water pollution and contamination of drinking water supplies (4th)
- Transboundary illegal shipments/ imports and exports of hazardous waste, toxic chemicals, contaminated product, pesticides, contraband CFC (1st, 2nd, 3rd)
- Montreal Protocol: enforcement of CFC and related requirements (1st, 3rd, 4th)
- Enforcing domestic programs implementing international agreements (1st, 4th)
- Establishing international networks (3rd, 4th)
- Collaborative international targeting of enforcement (4th)
- Organizing Programs (2nd, 3rd, 4th)
- Financing Programs (2nd, 3rd, 4th)
- Intergovernmental enforcement relationships (1st)
- Enforcement policy and authorities (1st, 2nd, 4th)
- Field citation and related administrative enforcement programs (3rd)
- Enforcing the law at government owned or operated facilities (2nd, 3rd)
- Enforcing in economically depressed circumstances/areas (2nd, 3rd)
- Privatization as an opportunity to enhance compliance (2nd)

Numbers reflect proceedings from conferences in which the topics were discussed and papers and discussion summaries available.

**Figure 6. Special Topics Addressed at Four International Conferences**

• **Institution building**

The important message in institution building is to start. Many country examples are now available which suggest some common experiences that might be applicable in many different settings. Norway's experience suggests that it is best to create an independent enforcement and inspection function as their program evolved from an integrated permit and compliance program in which personnel had multiple roles to one with discrete functions to improve professionalism. Mexico's experience with extensive training programs for their inspectors is part of a larger effort to improve interagency coordination and decentralize enforcement. The Netherlands has established coordinating councils to organize response to violations among several agencies at different levels of government efficiently and to address all aspects of the problem.

- **Transboundary export/import of illegal shipments of hazardous waste, pesticides and ozone depleting substances**

If ever there were a need for networking and cooperation it is the transboundary shipments issue. Complicated to detect, and facing an increasingly cynical community which is creating ways to evade detection as quickly as they are discovered, several obstacles to gaining strong controls on the export and import of illegal shipments still exist. In particular, the search for a clear and consistent definition of hazardous waste continues to be a challenge, and detection requires extensive coordination of departments within governments and internationally. Exporting nations need to take more responsibility for promoting compliance given the lack of full understanding of international requirements. Lack of strong requirements in some developing countries, that are sufficient to protect them from improper disposal of hazardous waste is still a problem. To effectively control export and illegal import there is a need to continue the ongoing international efforts to share information and develop regulatory and institutional frameworks through Interpol, Basel Convention implementation and local regional cooperative arrangements. The Proceedings of the Fourth Conference offer Nigerian and Dutch views on tricks of the trade, U.S. tips for investigation strategies, and China's experience in assessing responsibility and working with the full range of actors to resolve problems.

- **CFC controls to implement the Montreal Protocol**

Several developed nations have begun aggressive enforcement programs aimed at implementing the goals of the Montreal Protocol. However, many developing countries and some developed countries have not yet begun to achieve the international goals set by the Montreal Protocol due to lack of support, lack of funding and lack of capacity. As CFC containing materials are banned, illegal exports, particularly to developing countries, are increasing and there is a particular need for cooperation and transfer of knowledge.

- **Government owned and operated facilities**

It is essential for the credibility of compliance and enforcement programs and achievement of environmental goals that government owned and operated facilities be held accountable for compliance in the same manner as private sector facilities. Although there is significant public support for the idea that governments should live up to the environmental standards they set for their citizens, legal and political barriers make this idea very hard to implement. A variety of approaches and institutions are necessary to produce environmental compliance and cleanup at government facilities. Most important are an independent judiciary, funding for compliance and cleanup, public awareness and involvement, and enforceable requirements.

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- **Enforcement of economic instruments**

Worldwide experience with economic instruments for environmental protection is still quite limited although a wide range of economic instruments have been used in developing as well as developed nations. Experience to date indicates that some types of economic instruments, especially the more complex ones such as tradeable permits, can require at least as much enforcement and monitoring as do the more traditional command-and-control regulations. Economic approaches in fact require good information and monitoring systems which can also raise costs for regulated entities. There is real interest in the potential of economic instruments to address environmental issues more efficiently. However, this interest is tempered with caution, particularly in developing countries, given the difficulty of implementation and the fact that a firm regulatory and enforcement base is often required.

- **Role of communications**

There is widespread agreement that an informed and supportive citizenry is essential to achieve the political support for enforcement, and communication of enforcement actions is essential to gain the deterrent impact of enforcement response.

- Public disclosure: led to major pollution prevention efforts instead of cleaning up pollution at the end of the pipe. The press can be a major ally in helping to improve compliance and implement enforcement programs.
- Citizen enforcement: plays a critical role in making enforcement effective in achieving compliance. Public support and an educated citizenry are essential to support enforcement. This can be accomplished through disclosure to the public of information on releases. Governments need to support NGO participation in the enforcement process.

- **Enforceable requirements**

A major theme at the second international conference was how to establish enforceable requirements. Criteria, checklists, and country experiences are now available in Conference proceedings, and results reported, particularly in regard to hazardous and solid waste. Shared problems with definitions, and confusing requirements mingled with the need for improved waste management approaches and waste minimization were discussed and described in conference papers. The Fourth International Conference continues to explore this topic with a focus on safe drinking water.

- **Voluntary compliance**

Voluntary compliance programs (i.e. programs to encourage and promote compliance, not compel compliance through legal process) are important to achieving compliance, especially as a complement to a regulatory framework and strong enforcement program. Countries which are just

developing their regulatory and enforcement framework may only be able to begin with voluntary compliance efforts, but such initiatives are strongly encouraged, even though their effectiveness will be far greater once enforcement and regulatory frameworks are in place. Approaches need to examine all aspects of compliance, using all motivations, particularly public pressure and concern for market share. The role of media is important in raising public awareness.

For small or economically marginal business, the goal of voluntary programs might be compliance with the law, whereas large or more profitable businesses can be encouraged to go beyond compliance to reduce waste and prevent pollution. There are significant benefits to promoting environmental auditing by companies and policies should avoid discouraging self audits. Environmental education can change behavior in early years, establish environmental values, and provide for public pressure for compliance.

- **Enforcement policies and authorities**

Conference papers and workshops have explored the use of administrative, civil judicial and criminal enforcement, their relationships, and relative strengths, human resource requirements and program implementation.

- Creative new authorities to balance risk, compliance and ability to pay considerations: Polish and Czech officials have recently developed enforcement response policies and authorities which they are calling "compliance programs" to better take into account harsh economic realities while maintaining the rule of law and commitment to compliance based in part on experiences in the U.S. reported at the First International Workshop. The U.S. employed negotiated compliance schedules to address compliance by the iron and steel industry faced with economic hardship in depressed economic areas, tough environmental standards to meet quality goals in the heavily polluted iron and steel belt. The new approaches also seek risk based pollution prevention and control which may go beyond what is required to comply, employing models similar to those used in the U.S. on a selective basis in creative enforcement settlements which included supplemental projects to prevent pollution beyond mere compliance in exchange for somewhat reduced penalties.
- Field Citations: Empowerment of inspectors or field officers to take complete enforcement action when confronting certain types of environmental violations was widely viewed as a desirable feature of an enforcement program. Field citations were felt to have a great deal of potential for streamlining lengthy administrative enforcement procedures which have proved to be very frustrating to enforcement officials around the world. There were a wide variety of approaches among countries to the authorities given to field officers, ranging from

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assessment of a small fine to closure of the facility. Field officers can include a variety of personnel including inspectors, park rangers and police officers.

- Criminal enforcement: Countries employ criminal enforcement very differently, some reserving it for the worst offenses, while the majority of environmental offenses are criminal in other countries. Most countries recognize the particular deterrent value of criminal enforcement in the potential and actual application of jail terms to violators. Education of judges and hearing officers can be a key factor in the successful prosecution of environmental crimes. Criminal enforcement mechanisms can deliver a full range of potential sanctions and consequences for responding to environmental violations, and not just jail terms and fines. It is increasingly being viewed as an important enforcement tool best utilized in an enforcement scheme which contains multiple response options.

- **Compliance monitoring**

The backbone of any compliance and enforcement program, compliance monitoring raises many issues including the role and training requirements for environmental inspectors, relationships to civil and criminal investigators, relationships to legal staffs, and issues related to potential roles in promoting compliance, providing assistance, and in enforcement response. Norway described its experience which led to separation of the permitting and inspection functions and the use of inspection fees for inspections augmented by payments to third parties to conduct audits in the absence of government inspection. Conference exchanges have also explored issues related to single versus integrated or multimedia inspections, source self-monitoring record keeping and reporting, and the use of third party audits. Key results of these discussions include:

- Training and developing expertise: The United States has reviewed its establishment of the National Enforcement Training Institute, federal requirements for inspector training and a National Enforcement Investigations Center which supplements the work of state and regional inspectors and investigators. In response to a request by the government of Mexico, the U.S. EPA developed training programs with Mexico for Mexican inspectors and customs officials which are equally beneficial to U.S. EPA.
- Third party audits: Several countries have explored ways to augment their own inspector resources through third parties. For the First International Workshop, Norway described its experience with the use of inspection fees for inspections augmented by payments to third parties to conduct audits in the absence of government inspection. For the Fourth Conference, the Mexican government describes an environmental audit program to augment its limited compliance monitoring resources, which may provide the basis for a more formal third party system.

- Role of police: Police offer significant potential to serve as additional eyes and ears for detecting environmental violations given their significant number and distribution and a lack of sufficient resources in environmental departments. Police may play a particularly valuable role in uncovering and solving environmental crimes and some countries have developed specialized police to investigate this sort of criminal activity. Training is essential to make police aware of environmental infractions, civil and criminal, and to enhance appreciation of their significance as crimes. Given the need for technical skills and know-how, the role of police must be carefully coordinated with that of the environmental department, using different means applicable to respective countries. The Dutch reliance on their police corps to investigate and bring criminal enforcement action inspired outreach within the U.S. to Chiefs of Police and a program of training and awareness in the State of New Jersey which was adapted for national use to augment a corps of civil inspectors and criminal investigators for environmental crimes.
- Source self monitoring and reporting: were identified as key ingredients for success at the second International Conference where costs were affordable, as it ensured greater accountability by the regulated community, provides more complete and timely information, and shifts some of the cost burden from the government. A new study comparing country approaches will help further discussions on the subject.

### 3.5 Emergence of new institutional arrangements for regional and international networking and cooperation

The Conferences already have spawned several new institutional arrangements for regional and international networking and cooperation. IMPEL, the European Enforcement Network of the European Commission and member states, ( which stands for Implementation and Enforcement of Environmental Law), was largely inspired by exchanges at the first International Enforcement Workshop on efforts to build the federal/state relationship within the United States. Several papers have been prepared for the Proceedings of the Third and Fourth International Conferences on cooperative projects on enforcement to prevent illegal transboundary shipments of hazardous waste and on notification of new substances. Following the second Conference in Budapest, Hungary, in 1992 the Regional Environmental Center helped to foster further exchanges among governmental and nongovernmental officials within Central and Eastern Europe.

At the Third Conference regional enforcement cooperation was described for North America under NAFTA. The historic North American Free Trade Agreement and its environmental side agreements have established an unprecedented level of international cooperation and mutual support in enforcing environmental laws. A plenary program panel on international networking and cooperation was presented to stimulate interest to foster ongoing exchanges and capacity building both regionally and globally based upon natural partnerships and common environmental challenges. Spontaneously during informal sessions, participants from the Americas developed the Oaxaca Declaration, committing themselves to work together to establish a network for helping to build programs. Subsequently the Summit of the Americas has led to more formalized efforts.

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There is enormous activity now in Central and Eastern Europe to enhance environmental enforcement. Interpol has been strengthened as an institutional mechanism for exchange of information on environmental crime. The Caribbean basin is coordinating efforts to protect the Gulf of Mexico and its fragile ecosystems and Central American nations have joined to enhance and harmonize their environmental laws to achieve sustainable development goals.

In November of 1994, UNEP and the People's Republic of China's National Environmental Protection Agency organized an Asia regional workshop on industrial compliance using its draft UNEP workshop materials with representatives from 8 nations in attendance.

#### **4 A LASTING LEGACY: INSTITUTIONAL ARRANGEMENTS FOR ONGOING REGIONAL AND INTERNATIONAL NETWORKS AND COMMUNICATIONS**

To leave a lasting legacy from the series of conferences it is important not only to develop and disseminate the proceedings, workshop materials, and related documents — all tangible products — but also to develop regional and international mechanisms for continued exchange — leading to appropriate mechanisms for cooperation and shared progress globally across regions that transcend the biennial conferences.

##### **4.1 Regional networks**

The Fourth Conference provides fertile ground and opportunity for participants to adopt the most appropriate approaches for their own countries and regions. Reports on regional meetings among officials from Africa, the Americas, South Asia, Southeast Asia and the Pacific, Central and Eastern Europe, West Asia and Middle East, and Western Europe will summarize country programs' status and progress, shared problems and challenges, institution building need and opportunities for support and exchange, proposals for regional and international networking and cooperation. Both the Principles of Environmental Enforcement definitions and frameworks and the UNEP workshop materials provide a foundation for discussions.

Each region will report out at the Plenary session discussions on the last day on these issues. Whatever the subject or avenues of exchange, the Conference organizers are looking toward an ongoing mechanism which can result in even greater progress reported at the Fifth International Conference.

##### **4.2 Joining the World-Wide Web**

In the interim, steps have and will be taken to create vehicles for exchange which will be both more effective and less costly than the biennial conferences. By the time of the Fourth International Conference, a homepage will be ready for use keyed off of Earth 1, U.S. EPA's homepage. It will sport the Conference logo and logos of its sponsors. It will provide cross-links to sponsors' homepages to take advantage of materials they have to offer and provide in electronic form all of the proceedings, technical and capacity building support documents and workshop manuals created by the international collaboration for widespread use. As a part of the homepage, there will be an ability to make inquiries, request assistance or send comments to the Executive Planning Committee and staff on the materials and issues related to environmental compliance and enforcement.

## **ANNEX 1**

This annex provides a brief synopsis of the "Principles of Environmental Enforcement" text reprinted in its entirety in the Proceedings of the second International Conference on Environmental Enforcement held in Budapest, Hungary, September 1992. It offers definitions of compliance and enforcement, principles, a general framework, and range of options for addressing each element of the framework for establishing effective compliance and enforcement strategies and programs in any international setting. It considers the full range of motivations and barriers affecting compliance behavior, and offers reasons for concern about effective compliance and enforcement efforts tailored to the specific circumstances and problems presented.

### **1 DEFINING COMPLIANCE AND ENFORCEMENT**

One of the most difficult challenges for international exchange and enhancement of compliance and enforcement is finding the proper translation for the terms "compliance" and "enforcement" in different languages. The following definitions are used:

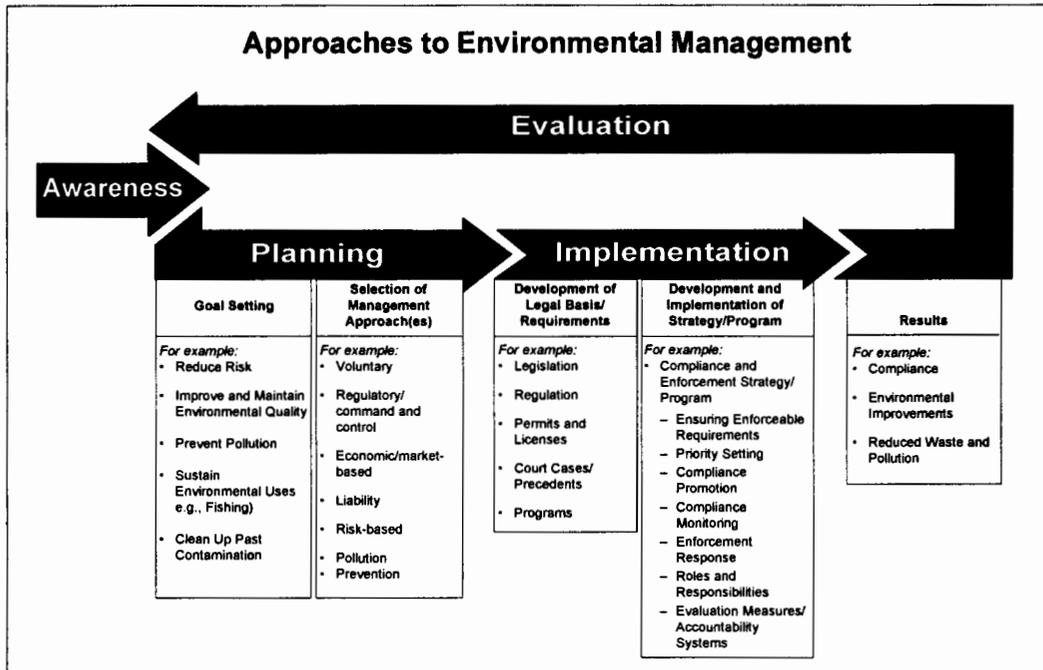
#### **1.1 Compliance**

Compliance is a state in which environmental requirements are met and maintained<sup>1</sup>. Environmental management decisions to address environmental problems include many different choices, ranging from voluntary programs to traditional regulatory approaches, from economic approaches to liability schemes where individuals or groups are accountable for consequences of their actions, or involving combinations of these approaches (see Figure A1-1). Compliance is a concern only where requirements are a part of a management scheme to achieve environmental goals, whether it involves traditional regulatory approaches or economic-based requirements, such as the payment of fees.

#### **1.2 Enforcement**

Enforcement refers to the use of legal tools to assist in and compel compliance with environmental requirements, and in some contexts to establish liability or responsibility for harm to the public or environment from polluting activities<sup>2</sup>.

For simplicity, "environmental enforcement" has sometimes been used, (for example, in the title for the international conferences and for the "Principles of Environmental Enforcement" text and training course), as a shorthand for the term "compliance and enforcement programs". In this use of the term it encompasses the full range of "carrot and stick" approaches to gaining compliance, going beyond the above definition to include inspections and other forms of compliance monitoring (e.g., to find information needed to determine compliance status and to identify violations) in addition to legal actions to impose some consequences for violating the law and would also include compliance promotion activities such as technical assistance and subsidies. Some may prefer to speak in terms of "compliance and enforcement programs" to ensure that this broader meaning is clear.



**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.

**Traditional Regulatory or Command and Control** In traditional regulatory or command-and-control approaches, the government prescribes the desired behavior changes through requirements, then promotes and enforces compliance with these requirements. Requirements may be imposed through laws, regulations and/or permits and can include:

- Technology requirements.
- Performance-based requirements.
- Work practices or best management practices.
- Testing and/or monitoring, reporting and/or record keeping.
- Bans on certain products or practices.

**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. 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*, which 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 which the government auctions limited rights to produce or release certain environmental pollutants.
- *Environmental labeling/public disclosure*, in which 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.

**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.

**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.

**Figure A1-1.**

### 1.3 Compliance and enforcement program

A compliance and enforcement program is an organization, management systems, and human and financial resources dedicated both to encouraging and compelling compliance. The terms "compliance program" or "enforcement program" also may be used, although the most common uses of these terms describe efforts to encourage and compel compliance, respectively<sup>3,4</sup>. These programs are exclusive of efforts to define environmental requirements through laws, regulations, and permits, but include relationships to ensure that the design and language for requirements are enforceable.

## 2 IMPORTANCE OF COMPLIANCE AND ENFORCEMENT CONCERNS

Once environmental requirements are established, we depend upon compliance with those requirements to achieve their intended benefits. To achieve actual changes in behavior, governments must devote resources to encourage compliance, overcome barriers, and ensure that consequences for violations of those requirements exist. Without this commitment to enforce the law, governmental agencies lose credibility and leverage to achieve more widespread compliance, signaling the public that compliance is not a priority. Further, long-term economic health often depends on environmental protection that may not seem to be economically advantageous in the short run, causing inefficient short-run decision-making. Finally, enforcement provides an element of fairness for those who comply with requirements where it reduces or eliminates the economic advantages that might be lost to those who choose to violate the law, particularly where sanctions are at least as high as the economic noncompliance. (See Figure A1-2).

## 3 MOTIVATING COMPLIANCE BEHAVIOR

Many factors affect whether compliance behavior results from the adoption of environmental requirements for industrial sources, such as social, moral, and personal influences, the level of technical sophistication, familiarity with the requirements, and economic factors. No one can predict human behavior, and a successful compliance strategy must address all of these factors to overcome the barriers to compliance. Figure A1-3 lists some of these factors.

Enforcement by government programs seeks to correct violations and create an atmosphere in which the regulated community is stimulated to comply both because the government has demonstrated a willingness to act when noncompliance is detected and because of the consequences such actions bring to bear. Deterrence is a principle that is fundamental to all enforcement programs. "Deterrence" is the creation of an atmosphere in which many choose to comply rather than violate the law. Four interrelated elements are needed to create deterrence:

- A credible likelihood that a violation will be detected.
- A swift and certain response by government or others.
- Appropriate consequences in the form of sanction or penalty.
- The perception that the above conditions exist.

### Why Are Environmental Enforcement Program 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.

Figure A1-2.

Each element of a compliance and enforcement program relates to these aspects of deterrence. Inspection programs are established in large part to ensure a credible likelihood of detection. There are other possible purposes for inspections such as educating the regulated community, or establishing compliance statistics. The enforcement response part of an enforcement program is designed to ensure swift and sure response and appropriate sanction. There is also an important communications component to any enforcement effort to ensure that there is a general public awareness about the consequences of violating the law and that there is a strong possibility of being detected. These factors are interrelated. The less likely a violation is to be detected, the greater the consequences must be to establish effective deterrence when violations are detected.

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.

#### 4 THE GENERAL FRAMEWORK FOR COMPLIANCE AND ENFORCEMENT

The "Principles of Environmental Enforcement" text offers a general framework for compliance and enforcement with seven elements:

- Creating requirements that are enforceable.
- Knowing who is subject to the requirements and setting program priorities.

FACTORS MOTIVATING COMPLIANCE	BARRIERS TO COMPLIANCE AND FACTORS ENCOURAGING NONCOMPLIANCE
<b>ECONOMIC</b>	
<ul style="list-style-type: none"> <li>• Desire to avoid a penalty.</li> <li>• Desire to avoid future liability.</li> <li>• Desire to save money by using more cost-efficient and environmentally sound practices.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of funds.</li> <li>• Greed/desire to achieve competitive advantage.</li> <li>• Competing demands for resources.</li> </ul>
<b>SOCIAL/MORAL</b>	
<ul style="list-style-type: none"> <li>• Moral and social values for environmental quality.</li> <li>• Societal respect for the law.</li> <li>• Clear Governmental will to enforce environmental laws.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of social respect for the law.</li> <li>• Lack of public support for environmental concerns.</li> <li>• Lack of government willingness to enforce.</li> </ul>
<b>PERSONAL</b>	
<ul style="list-style-type: none"> <li>• Positive personal relationships between program personnel and facility managers.</li> <li>• Desire on the part of the facility manager to avoid legal process.</li> <li>• Desire to avoid jail, the stigma of enforcement, and adverse publicity.</li> </ul>	<ul style="list-style-type: none"> <li>• Fear of change.</li> <li>• Inertia.</li> <li>• Ignorance about requirement.</li> <li>• Ignorance about how to meet requirements.</li> </ul>
<b>MANAGEMENT</b>	
<ul style="list-style-type: none"> <li>• Jobs and training dedicated to compliance.</li> <li>• Bonuses or salary increases based on environmental compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of internal accountability for compliance.</li> <li>• Lack of management systems for compliance.</li> <li>• Lack of compliance training for personnel.</li> </ul>
<b>TECHNOLOGICAL</b>	
<ul style="list-style-type: none"> <li>• Availability of affordable technologies.</li> </ul>	<ul style="list-style-type: none"> <li>• Inability to meet requirement due to lack of appropriate technology.</li> <li>• Technologies that are unreliable or difficult to operate.</li> </ul>

Figure A1-3. Factors Affecting Compliance

- 
- 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.

These components form a framework within which any government at any level must consider issues pertinent to designing a compliance and 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. The framework also calls for a dynamic process, one which evaluates and adjusts to the successes and failures of proposed compliance strategies. The full text provides a range of alternative approaches to meet the needs represented by the elements of the framework.

#### 4.1 Creating environmental laws and requirements that are enforceable

Once a management approach is selected which includes requirements, enforcement concerns begin and are addressed at requirements' design stage, not only after the requirements are put into effect. Without clear definition of who is required to do what by when, how both the regulated community and enforcement officials will be able to credibly detect violations and establish compliance status, and what the consequences of noncompliance will be, the achievement of widespread compliance is unlikely.

There are several implications for program design. First the need for clear and enforceable requirements may suggest a preference for tailored permitting of industrial activities in order to adapt and interpret general regulations to the particular processes and circumstances at the facility. It also suggests a need to establish appropriate linkages between those organizations responsible for developing regulatory and permit requirements with those responsible for inspecting and enforcing requirements.

#### 4.2 Knowing the regulated community and setting priorities

A further principle of environmental enforcement that enforcement shares with other aspects of environmental protection is the need to establish priorities that 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.

No program can be everywhere at once to detect violations or to respond to each and every violation. Accordingly, priorities must be established based upon the environmental consequences of the violation, the need for consequences for the regulated community to encourage the desired behaviors given the level of sophistication of the regulated sources, and the barriers to and incentives for compliance. Information must be assembled and managed in a way that can help program managers decide how to focus resources: for example, who to

inspect and how often, how to balance resources between compliance promotion and enforcement in the most effective way given the nature of the compliance challenge and regulated sources, and which violations to respond to and how.

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.

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

- Identifying information, e.g., the name of a 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).
- Compliance status, schedules, violations, and status of responses.

The ability to analyze the information on a facility-by-facility basis is necessary in order to determine patterns of noncompliance.

The enforcement program needs to establish who in the organization is responsible for collecting, analyzing, and managing the information, for defining requirements for information, and for evaluating whether the information is accurate and useful. The program will need a system (computerized, if possible) to store, access, and analyze the information, as needed.

#### 4.3 Promoting compliance

*Compliance promotion* is any activity that encourages voluntary compliance with environmental requirements. Promotion helps overcome some of the barriers to compliance. Most compliance strategies involve both activities to promote and enforce requirements; policymakers need to determine the most effective mix of compliance promotion and enforcement response.

Experience has shown that promotion alone is often ineffective. Enforcement is important to create a climate in which members of the regulated community have clear incentives to make use of the opportunities and resources provided by promotion. However, 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 cultural resistance to enforcement.

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

- Providing education and technical assistance to the regulated community.
- Building public support.

- 
- Publicizing success stories.
  - Providing creative financing arrangements.
  - Providing economic incentives.
  - Building environmental management capability within the regulated community.

#### 4.4 Monitoring compliance

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 both by government and the regulated community.
- Provide evidence to support enforcement actions.
- Evaluate program progress by establishing compliance status.

The four primary sources of compliance information are:

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

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 audit reports provided by the facility.

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. 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 are made available to enforcement personnel without delay if a possibility of noncompliance exists.

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

- Selection of facilities for inspection.
- Announced versus unannounced inspections.
- Frequency of inspection.
- Inspector selection: government, contractors, third parties, etc.
- Legal authority: to gain access to the facility, to information and files, etc.

- Role of the inspector: whether the inspector will also be authorized to take an enforcement action in the field, provide technical assistance, and/or make judgments about compliance.
- Status that are communicated to the facility at the time of inspection.
- Comprehensiveness of the inspection: whether there will be sampling, how detailed the sampling will be, whether the sampling will be focused on one or all environmental programs and media, etc.
- Inspection of related activities.
- Ensuring the objectivity of the inspector.
- Documenting the violation.
- Inspector training.
- Data quality.
- Consistency of sampling and analytical procedures.
- In addition, 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.

Source 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. They are now recognized as essential to supplement and support inspections reflected in Concluding remarks from the Proceedings of the Second International Conference on Environmental Enforcement, Volume II, page 237, which concludes source self monitoring should be required more as a basis for compliance monitoring with due consideration of the costs to small and medium sized facilities. These activities can provide much more extensive information on compliance than can be obtained with periodic inspections, shifting some of the economic burden of monitoring to the regulated community. In addition, performing these activities educates the regulated community about their own compliance, increases the level of management attention devoted to compliance, and may inspire management to improve production efficiency and prevent pollution.

Reliable and affordable monitoring equipment must be available to the regulated community. Its successful use also relies upon the integrity and capability of the source to provide accurate data. Data will be misleading if the source either deliberately falsifies the information or lacks the technical capability to provide accurate data. Therefore, programs need to establish ways 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, and by providing penalties for false reporting. Program officials will need to provide guidance to the regulated community on what the standard procedures, methods, and instruments are for obtaining the data; how frequently data should be collected; and how the data should be recorded and reported.

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.

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. The main problem with ambient monitoring is that demonstrating that the pollutants measured came from a particular facility can be difficult. 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.

#### 4.5 Enforcement responses to violations

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 consequences of noncompliance. Enforcement responses may also seek to correct and redress actual or potential harm caused by environmental pollution, whether or not the pollution violates a specific requirement.

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—through policies and training—all of which serve to establish and reinforce the credibility of environmental laws and the governmental institutions that implement them. Economic equity, in particular, can be achieved through enforcement where economic sanctions imposed on violators through enforcement actions are at least as high as the economic gain from noncompliance. Fundamental principles 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 negotiations to ensure that correction is practical and 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.

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 necessary 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.

A range of authorities and response mechanisms can be used for enforcement. Most countries with enforcement programs have some but not all of these authorities and mechanisms because they are developed over time to respond to new and different situations for which existing authorities prove to be inadequate. Each program must work within the possibilities offered by the legal system or systems under which the program operates.

Figure A 1-4 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.

### TYPES OF ENFORCEMENT AUTHORITIES <sup>1</sup>

#### 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 cleanup 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

<sup>1</sup> 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 environmental laws. These authorities may be either direct authorities or the authority to seek a court order to impose the sanction.

**FIGURE A1-4. Types of Enforcement Authorities**

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 are formal or informal, civil or criminal, administrative or judicial. 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, appeals, and dispute resolution. 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.

Negotiation, an integral part of enforcement, 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, as well as an opportunity to reach a solution that satisfies all parties. Enforcement actions create a stimulus and context for discussion and resolution, providing 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.

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.

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.

#### 4.6 Clarifying roles and responsibilities

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

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

- 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 different types of staff be integrated within a single organization (e.g., scientists, engineers, policy and program analysts, attorneys)?

Regardless of the organization selected for the program, key principles that emerge are the need for clarity of roles, strong and supportive working relationships, and good communication among all of the key players given the different levels of expertise and roles that must be played to make any program work effectively. A balancing must occur between giving responsibility to those closest to the environmental problems and ensuring an element of fairness and national consistency in enforcement.

#### 4.7 Evaluating program success and establishing accountability

Finally, a fundamental principle of environmental compliance and enforcement programs is its dynamic nature. There is a need for constant reassessment and review based upon changing circumstances tailored to the nature of the regulated community and other social and economic influences.

Information can be a powerful and vital tool for successfully implementing an enforcement program. Information about program activities and results can ensure that the 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.
- Internal accountability.
- Creating deterrence.
- Public accountability.

Measuring the success of an enforcement program is not easy. Program measures include (see also Figure 5):

- 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.

Each of these measures 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. Because 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 to recommend improvements.

## 5 DESIGNING COMPLIANCE AND ENFORCEMENT PROGRAMS

The principles of environmental enforcement are the foundation upon which compliance and enforcement programs are built. To make them function properly requires the priority and commitment of government managers at the highest levels. Proper functioning also requires the consideration of many factors that enter into their design and implementation of these programs.

The Principles document identifies design issues in establishing a program, including:

- Personnel: roles, staffing levels, training, and use of third parties.
- Information management systems: planning issues.
- Program funding: review of various sources.
- Evolution of enforcement programs: where do they start?

One of the most important principles of environmental enforcement is just to start doing it — no matter how inadequate the resources or legal tools. Compliance and enforcement programs will evolve and improve over time, environmental improvements cannot be made without taking these first steps.

The UNEP Institution Building Workshops for Industrial Compliance pick up where the Principles of Environmental Enforcement leave off, exploring in more depth:

- Organization.
- Human, financial, and information resources and management.
- Inspection and enforcement response capability.
- Permitting processes for industrial facilities to enhance compliance.

**ENDNOTES**

1. This means that facilities, processes, owners or operators of polluting facilities or regulated activities exhibit the appropriate or desired behaviors, for example, when appropriate processes, raw materials, and/or work practices are used; when hazardous waste is disposed of at approved sites or in the appropriate manner; when appropriate tests are performed and/or reported on new products or chemicals before they are marketed; when environmental releases are within acceptable limits, etc.
2. These activities may include the application of legal authority to compel compliance, to compel remedies to environmental noncompliance or hazards, to impose sanctions for violating the law/requirements, or to compel the development of information essential for determining compliance or the appropriate means of achieving compliance. It may also include the use of legal tools to protect public health and environment in the absence of requirements, where there is legal authority to address, for example, imminent hazards or accidents. It is meant to include the full range of responses, from informal administrative actions to formal administrative processes of the filing of court suits.
3. The most common use of the term "enforcement program" includes at least inspection activities and legal enforcement response. In these instances, compliance promotion and assistance activities may be carried out by the same or different organizations.
4. The most common use of the term "compliance program" includes those activities designed to encourage or assist compliance. However, the term also is used more broadly to describe the full range of activities to encourage and compel compliance.

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**ANNEX 2**  
**PRINCIPLES OF ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT TRAINING**  
**COURSE****1 SUMMARY OF COURSE**

The "Principles of Environmental Enforcement" text and associated training exercises, and role-playing and case-study materials were developed in 1991 by the U.S. EPA in cooperation with Poland's Environment Ministry and the Dutch Ministry to assist policymakers in any international or domestic setting to develop the institutional capacity for designing and implementing effective programs for compliance with environmental requirements.

The training is designed as a three-day course. The first day consists of a series of exercises that introduce participants to basic concepts and a range of options. Participants explore:

- environmental goals, desired behavior change to achieve those goals, and the range of environmental management approaches to achieve them;
- what factors motivate and/or create barriers to achieving behavior change, definitions of compliance, enforcement and deterrence, and why compliance and enforcement concerns are important;
- drafting of enforceable requirements, where appropriate, and what makes requirements clear and effective;
- compliance monitoring information needs and approaches from the perspectives of the regulated community and government officials;
- the range of enforcement responses, their applicability to a range of situations and the need for predictable policies;

The second day provides an opportunity for participants to design their own environmental management approach, draft enforceable requirements, and design elements of compliance and enforcement strategy for a fictitious community and environmental problem. Participants explore:

- the application of different environmental management approaches to a particular problem;
- the drafting of enforceable requirements where applicable;
- designing compliance promotion strategies;
- balancing compliance promotion and enforcement resources;
- designing compliance monitoring strategies and establishing the frequency and type of inspection;
- anticipating potential violations and designing enforcement response policies;
- evaluating results and revising strategies.

The third day involves an enforcement negotiation settlement role-play, where participants act out different roles and consider an enforcement problem from different perspectives.

## 2 DESIGN CHARACTERISTICS OF THE COURSE

- 2.1 The enforcement training is philosophically neutral and generic (i.e., not geared to any specific requirements)

Because environmental programs in Poland were undergoing radical changes, the course had to transcend debates about the mix of "command and control," "market based," or "voluntary" approaches to pollution control, as well as legal authorities and systems. The course participants themselves select an environmental management approach to a particular environmental problem; only from that vantage point do they then gain experience in drafting enforceable requirements, where they are appropriate, for designing compliance strategies covering promotion, compliance monitoring, enforcement response policies, and evaluation of results.

- 2.2 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 government level. 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. The course has now been "handed off" to trained in-country facilitators in Poland, Hungary, and Turkey.

- 2.3 The training offers a rich menu of options and ideas so that key policy makers can design the program best suited to their culture and legal systems

The course needed to be based on something broader than U.S. experience, particularly because Poland and other Central and Eastern European nations were interested in closer ties with Western Europe as well as the United States. We decided to seek active participation from the Netherlands as well as broader international contributions to make the course useful internationally. The contacts developed through the first International Enforcement Workshop became the basis for the cooperation and consultation involved in developing an international course and included, in addition to the Netherlands, Canada, Sweden, Norway, the United Kingdom, Hungary, and others. Representatives from Poland's national inspectorate also participated, supplemented by a team of future facilitators who were consulted during course development.

The framework for compliance and enforcement programs and strategies involves seven basic elements:

- ensuring environmental requirements are enforceable;
- setting priorities;
- promoting compliance;
- monitoring compliance;
- responding to violations;
- clarifying roles and responsibilities for implementation; and
- evaluating and establishing accountability for results, taking into consideration the range of human behavior that transcends differences in legal systems and culture.

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2.4 The target audience of key policy makers is broadly defined

Government officials, academics, nongovernment organizations, industry representatives, and even journalists are all involved in some fashion in reshaping existing programs and policies. The course is designed to include all these groups as potential participants.

2.5 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. The framework is used only as a point of departure from which all nations can improve and build their own unique, and hopefully successful, enforcement approaches.

2.6 The course is facilitated. 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.

2.7 The course introduces the roles that negotiation may play in reconciling tough economic, social, and environmental issues while preserving a credible and fair enforcement presence in fashioning a response to violations

One of the three days of the course is devoted to a role-playing exercise during which different interests are brought to bear in the resolution of an enforcement action against a violator. The exercise presents an opportunity for participants to see the interplay between the need for firm and fair enforcement and adherence to policy and competing demands on officials to address economic and social concerns. Experience with these very real pressures within the safety of role-playing can enable officials to deal with some of their real fears in taking on environmental enforcement concerns when problems seem intractable.

### 3 THE INTERNATIONAL COURSE AND ITS DELIVERY

The course has now been delivered in Poland, Hungary, Turkey, the Ukraine, Mexico, Russia, Bulgaria, the Czech Republic, Chile, Thailand, Malaysia, Taiwan, Nigeria, and is planned for delivery in El Salvador, Indonesia, potentially Egypt and South Africa. Participant response has been very favorable and enthusiastic. In all of these settings, the course has been designed to be handed off to in-country facilitators. The course materials consist of the text, course exercises, and the facilitator's manual.

The course text is available to any nation wishing to use it. The U.S. EPA's Office of Enforcement and Compliance Assurance is prepared to consider requests by other governments to train key officials and their own facilitators to offer it within their countries. For 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 governmental or nongovernmental organizations. The enforcement training is one of several modules offered in various aspects of environmental management. (The course is part of the training offered through the U.S. EPA's National Enforcement Training Institute.)

#### **4 FUTURE PLANS FOR THE TEXT AND COURSE**

Additional case studies have been developed for delivery at the International Conferences and elsewhere so that facilitators can select from among seven subject areas of environmental problems most likely faced by a country.

The ideas generated at the International Conferences on Environmental Enforcement and by course facilitators and course participants will help shape the future of the course, in terms of its content, usefulness, and distribution worldwide. We welcome continued input and ideas for the future of what is now called the Principles of Environmental Compliance and Enforcement course and suggestions for additional steps we can take to spread the enforcement message.

**THEME #3:**

**ESTABLISHING INTERNATIONAL COOPERATION  
AND REGIONAL NETWORKS:  
STATUS OF EFFORTS UNDERWAY**

Theme 3 papers describe international support networks for environmental compliance and enforcement. Each paper addresses, among others, the following issues:

- The genesis of the network and how it was established.
- What was/is involved in developing and maintaining the network.
- Who is asked to participate and at what levels in the organizations.
- Subjects the network covers.
- Vehicles used for exchange and means of communication used.
- Topics on which exchange is taking place.
- How the network overcomes differences in language and legal or other definitions of terms such as what constitutes a hazardous waste.
- Future directions and changes anticipated for the network.

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1. Summary of Panel Discussion of Theme #3, <i>Moderator: M. Enthoven, Rapporteurs: S. Oley, K. Rubin</i> .....	135
2. Emerging Networks of Environmental Enforcement and Compliance Cooperation in North America and the Western Hemisphere, <i>S.A. Herman, L.I. Sperling</i> .....	139
3. Towards Establishing A Regional Network in the West Asia/Middle East Region, <i>O.A. El-Kholy</i> .....	157
4. Establishing International Cooperation and Regional Networks, <i>D.H. Slater, A.W. James</i> .....	161
5. Enforcement and Compliance Programs in Central America, <i>P. Madrigal Cordero</i> .....	169
6. International Cooperation: <i>INTERPOL</i> , <i>J. van Doorn</i> .....	205
7. Transfrontier Shipments of Waste: Successes and Problems with the Enforcement of Supranational Legislation, <i>R. DeKrom</i> .....	209
8. A European Enforcement Project on the Notification of New Substances (NONS); A Cooperative Project of 14 European Countries, <i>L.C. Van Gent</i> .....	215

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See related papers from other International Workshop and Conference Proceedings:

1. The European Union Network of Environmental Enforcement Authorities, *D. Slater*, Volume I, Oaxaca, México
2. The Caribbean Environmental Program as a Network for the Caribbean Region, *M.T. Szauer Umana*, Volume I, Oaxaca, México
3. Environmental Crime and the Role of ICPO-INTERPOL, *S. Klem*, Volume I, Oaxaca, México
4. North American Trading Partners: Canada, United States, and México as an Enforcement Network, *S.C. Fulton, L.I. Sperling*, Volume I, Oaxaca, México
5. Summary of Theme Discussion: Establishing International Networks, *Moderator: D. Slater, Rapporteur: D. Bronkema*, Volume II, Oaxaca, México

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## **SUMMARY OF PANEL DISCUSSION OF THEME # 3: ESTABLISHING INTERNATIONAL COOPERATION AND REGIONAL NETWORK STATUS OF EFFORTS UNDER WAY**

Moderator: Marius Enthoven  
Rapporteurs: Shari Oley, Kenneth Rubin

### **GOALS**

Description of international support networks for environmental compliance and enforcement. Discussion of issues such as the genesis of the network, entities involved in developing and maintaining it, types and levels of participation, subjects addressed by the network, vehicles and topics of exchange, how the network overcomes differences in language and terminology, and future directions and changes anticipated for the network.

### **1 PRESENTATIONS**

Mr. Marius Enthoven, Directorate-General Environment, Environment, Nuclear Safety and Civil Protection, European Union, presented the Fifth Environmental Action Program for the European Union, a strategic plan for sustainable development in Europe. Targeting industry, energy, transportation, agriculture, and tourism, the plan has five dimensions:

- integrate EU policies into country laws;
- focus on environmental infrastructure;
- communicate with the regulated community;
- use networks, such as the 15-member state IMPEL network;
- integrate work of EU agencies with country agencies; and
- step up enforcement.

The EU must integrate environmental enforcement and compliance into other sectors that it is working on such as transportation and banking and insurance, broaden its use of economic or market based instruments, expand implementation and enforcement of EU-wide programs, increase awareness of EU-wide environmental programs, and increase international cooperation.

EU works with a policy life cycle model, i.e., This involves first recognizing the problem, gathering data, analyzing and deciding what portion or dimension of the problem to tackle. Then formulate a solution. Three instruments are emerging as the most useful in implementation. First are market oriented approaches, such as environmental charges, negotiated agreements, fiscal instruments, and environmental liability. The second is re-regulation, including increased flexibility to attain goals. The third is an upgrade environmental management and audit scheme (EMAS) to make it more useful to enforcement. The next step in the model is to implement the solutions and set up a management structure and enforcement protocol. Here, the program calls for strengthened legislation, increased reporting, enhanced intergovernmental cooperation, and more sanctions for offenders of environmental requirements. Integrating the ISO 14000 approach remains a large outstanding issue. The final step is continuous improvement, that is,

keeping the problem under control as you go forward. The EU has several issues currently under discussion for future resolution. Is there a need for an inspectorate at the EU level and if so, how should it be structured? Currently the enforcement inspectorates are domestic. How should the results of enforcement actions be used at the community level? Finally, what should be done about voluntary actions with respect to enforcement?

Dr. David Slater, Director, Pollution Prevention and Control, Environmental Agency, Canada, explained that the UK program has recently consolidated three media programs (waste, air and water) and budgets under a single agency with a new focus. They shifted emphasis from pollution control to sustainable development focusing on pollution prevention, communication with the regulated community, and networking across the EU. The need to network, in particular on legislation and standards and the development of expertise, was a key driving force. One of the most important and successful programs with regard to environmental compliance and enforcement is trading experts, a series of week-long staff exchanges which they find to be a great mechanism for capacity and morale building. Networks deliver information, consistency across programs, and support for problem solving.

Mr. Jan van Doorn, Chief, Environmental Crime Unit, INTERPOL, explained the workings of INTERPOL and cited achievements in networking country police, information exchange, and expertise exchange. INTERPOL maintains a worldwide network of police and information on international environmental criminal activities. The standard of information exchange regarding environmental crime is the ECO report. This aids in tracking various company activities across borders so that the activities of a company in one country can be linked with its activities in another. It can help penetrate parent/child company relationships, shell companies, and pursue enforcement of international environmental crime. INTERPOL also supports training programs to build environmental expertise.

Mr. Virah Mavichak, Director of Industrial Environment, division of Industrial Works Department, Thailand, discusses the need for more formal cooperation on environmental enforcement and compliance in Asia. In Thailand, ASEAN, comprising eight countries, represents the only such network. In particular, the ASEAN Senior Environmental Officer forum, in order to formulate environmental policy, maintains six working groups: (1) transboundary pollution, to define hazardous waste and develop a protocol to control transboundary movement of waste (2) environmental management approaches, to harmonize country approaches (3) environment and economy, to look at emerging programs of economic and market-based instruments in ASEAN countries (4) environmental information, to establish a monitoring network, which is only a conceptual design so far (5) sea water, and (6) environmental conservation. It has also established bi-lateral dialogues between member countries and the U.S., Canada, The Netherlands, the EU, and Japan and a tri-lateral agreement on ozone depleting substances, attempting to establish policy on CFC phaseout.

Dr. Ossama El-Kholy, Senior Advisor, Egyptian Environmental Affairs Agency, Egypt, explained that there is little regional cooperation in the Middle East. The perspective of a developing nation is different than a developed one, but to foster such regional networking, four things must be in place first: (1) a minimum level of commitment from top levels of government, (2) a domestic environmental framework, (3) international organization and agreements such as Montreal Protocol that will drive regional networking, (4) domestic expertise.

Mr. Steven Herman, Assistant Administrator, U.S. EPA, explained that since the Partnership for Pollution Prevention that came out of the December 1994 Summit of the Americas, the countries in the region are at the beginning of transition from talking about cooperation to taking action with efforts such as Haztracks, a joint effort of the U.S. EPA and Mexico's PROFEPA to track transboundary shipments of hazardous waste. There is currently a fair amount of technical cooperation between the two countries. The US has trained many

Mexican inspectors developing a regional infrastructure and talks are beginning that will set priorities and targets, resulting in specific enforcement actions on both sides of the border. With a respect for sovereignty and the domestic laws of the two countries, they are sharing policy, training, and information. NACEC, the North American Council on Environmental Cooperation, is serving as a neutral forum bringing countries together that might not otherwise do so. Such efforts offer training, contacts, idea-sharing, and mutual support (multi-country efforts can counteract opponents of enforcement better than can single countries).

## 2 DISCUSSION

Three questions were posed for discussion:

- Why is regional cooperation important?
- Are there general lessons that can be learned?
- What are the critical success factors?

Linda Duncan, from the Commission for Environmental Cooperation, suggested that regional cooperation can provide a neutral forum for bringing together countries that might not come together otherwise. Mr. Lee Paddock from the US pointed to four benefits of regional networking organizations used within the U.S. and border States: training, contacts, sharing ideas, mutual support. The Honorable Wilson Masilingi from Tanzania pointed out that when many countries join together it becomes harder for politicians from the individual countries to object to implementation of environmental enforcement. Mr. Tarek Genena discussed two success factor stating that (1) realistic approaches needed to be taken because countries have very different levels of capability and enabling statues, and (2) regional networking commitments must be based on available resources, both financial and human.

At the moderator's request, panelists listed their opinions on the most important achievements in international networking:

- implementation of the Montreal Protocol;
- strengthened and harmonized domestic programs that must precede efforts in international cooperation;
- international exchange of staff; and
- conferences such as this!



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## **EMERGING NETWORKS OF ENVIRONMENTAL ENFORCEMENT AND COMPLIANCE COOPERATION IN NORTH AMERICA AND THE WESTERN HEMISPHERE**

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### **SUMMARY**

This paper reviews progress to date in the emergence of networks of cooperation in environmental enforcement and compliance in North America and the Western Hemisphere, and explore the challenges and opportunities created by the development of such networks.

Since the Third International Conference on Environmental Enforcement, the countries of North America have continued to enhance and formalize bilateral and trilateral networks of environmental enforcement and compliance cooperation, making progress in a number of areas of cooperation. Under the North American Agreement on Environmental Cooperation, a working group of U.S., Mexican and Canadian enforcement officials has developed a cooperative work program on environmental enforcement, facilitated by the North American Commission for Environmental Cooperation. Meanwhile, citizen submissions on enforcement to the North American Commission for Environmental Cooperation has placed a spotlight on the commitment of the three countries to effectively enforce their environmental laws. The U.S. and Mexico continued to strengthen their bilateral cooperative relationship on environmental enforcement and compliance, building partnership among a diverse range of local, state and federal agencies to enhance enforcement and compliance efforts aimed at environmental problems in the U.S./Mexico border area.

Cooperation on environmental enforcement and compliance is beginning to take shape throughout the Americas, stimulated by the creation of a Western Hemisphere Partnership for Pollution Prevention, as well as a commitment of the governments of Central America and the United States to work cooperatively toward sustainable development. North America's evolving network of environmental enforcement cooperation is thus becoming a regional subcomponent of, and a possible model for, a broader Western Hemisphere enforcement network. The development of hemisphere-wide environmental enforcement cooperation, however, presents unique challenges. These include: the development of an institutional framework for cooperation; responding to an emerging debate over the role of environmental regulations and enforcement as opposed to voluntary approaches in achieving environmental goals; and the need to address the question of compliance capacity in the private sector.

### **1 INTRODUCTION**

At the December 1994 Summit of the Americas, the democracies of the Western Hemisphere established a Partnership for Pollution Prevention as they embraced the promise of hemisphere-wide free trade. In so doing, they acknowledged the need to couple development

through economic integration with cooperation in ensuring the effective implementation of sound environmental laws. Earlier, the negotiation of the North American Free Trade Agreement had similarly highlighted the need for environmental cooperation to minimize transborder pollution effects of increased economic activity, and to ensure a level playing field for free competition. The United States, Mexico and Canada responded to this challenge by accelerating the formal development of a multi-tiered, North America-wide network of cooperation in environmental enforcement and compliance. With increased hemisphere-wide environmental cooperation, this North American network presents itself as a regional subcomponent of an emerging hemisphere-wide environmental enforcement and compliance network.<sup>1</sup>

The Third International Conference on Environmental Enforcement, in Oaxaca, Mexico in April, 1994, laid the groundwork for developing a hemisphere-wide network of cooperation in environmental regulation, enforcement and compliance. Representatives of seventeen Western Hemisphere countries, the Organization of American States, and the Netherlands, signed a declaration to constitute a "Network of Friends of Environmental Law", with the goal of facilitating information exchange and collaborative work, including in the areas of compliance and enforcement, public participation, domestic environmental regulations, and training. One of the papers presented at the Oaxaca Conference outlined a possible framework for the development of regional networks of environmental enforcement and compliance cooperation, in North America and beyond. The paper suggested that such cooperation should be solidly based on respect for sovereignty and international comity, and should seek to develop a rational institutional framework to combine partnership among the various actors at all levels of interaction (e.g. regional, bilateral, national, subnational). The paper suggested that enforcement and compliance network activities might seek to address specific environmental problems through cooperative work which might include the following areas:<sup>2,3</sup>

- Strategic Priority-Setting and Targeting
- Compliance Promotion
- Compliance Monitoring
- Investigatory Cooperation in Specific Cases
- Sharing Experiences to Build Enforcement Capacity
  - Consultation on Laws and Policies
  - Training and Technical Assistance
  - Enforcement Results Information-Sharing
- Public Communication of Cooperative Enforcement Activity

Since the last conference, the countries of North America have continued to enhance and formalize the bilateral and trilateral networks of environmental enforcement and compliance cooperation; making progress in many of the above areas; and initial steps are underway toward enhanced enforcement and compliance cooperation throughout the Americas. This paper reviews the status of these efforts, and reflects on the challenges that lie ahead.

## 2 NORTH AMERICA: A MULTI-TIERED ENFORCEMENT AND COMPLIANCE NETWORK

NAFTA's "environmental side agreement", the North American Agreement on Environmental Cooperation ("Agreement"), created a unique institutional context for enhancing North America's network of cooperation on environmental enforcement and compliance, through the creation of the North American Commission for Environmental Cooperation ("Commission"), consisting of a Council of the Environment Ministers of the three countries, and a standing Secretariat, located in Montreal, Canada. In the first phase of the Commission's operations, a Permanent Working Group on Environmental Enforcement Cooperation was established to facilitate cooperation at the trilateral level, among national governments, states and provinces. Meanwhile, bilateral U.S./Mexico cooperation on enforcement and compliance has continued to grow, with particular focus on the U.S./Mexico border area. As a result, the past two years have witnessed the continued evolution of a multi-tiered institutional framework for environmental enforcement and compliance cooperation in North America.<sup>4</sup>

### 2.1 The North American Commission for Environmental Cooperation

The Agreement takes a multi-pronged approach to promoting environmental enforcement and compliance. Central to the Agreement is a commitment by the Parties to effective enforcement of their respective environmental laws, reinforced by two formal procedures:

- A procedure for citizen submissions asserting ineffective enforcement by a Party, to which the Secretariat may respond by requesting a response from the Party and developing a factual record.
- A procedure for claims by a Party that another Party exhibits a persistent pattern of failure to effectively enforce its environmental law, involving consultations, possible formal dispute resolution, and, ultimately, economic sanctions.<sup>5</sup>

Complementing these procedures is an obligation of the Parties, through the Commission's Council of Ministers and assisted by the Commission's Secretariat, to promote effective enforcement and compliance, including through technical cooperation. In July, 1994, the Commission Council directed the Secretariat to develop an enforcement and compliance cooperative work program to facilitate "cooperative initiatives to improve compliance in identified industry and natural resource sectors", as well as substantial exchange of enforcement and compliance information and dialogue on the comparability of enforcement and compliance measures.<sup>6,7</sup>

#### 2.1.1 Permanent working group on environmental enforcement cooperation

To implement these priorities, the governments created a Permanent Working Group on Environmental Enforcement Cooperation, consisting of senior representatives of the Parties with environmental enforcement and compliance responsibilities. These include representatives of: the U.S. Environmental Protection Agency, Fish and Wildlife Service, and Department of Justice; U.S. state environmental enforcement agencies; Mexico's Attorney General for Environmental Protection ("PROFEPA"); Environment Canada and the Canadian Department of Justice; and Canadian provincial environmental enforcement officials. Meeting in June and November, 1995, the Working Group adopted the following terms of reference:

- Strengthen cooperation between the parties in environmental enforcement and compliance while respecting the individual approach of each party.
- Deliver concrete cooperative enforcement and compliance initiatives.
- Establish working relationships among the environmental enforcement agencies in recognition of the shared borders and inherent shared enforcement and compliance challenges.
- Exchange information and experiences with alternative approaches to enforcement and compliance.
- Facilitate enforcement and compliance training opportunities among the three countries.

Subgroups were established to facilitate work in the following areas:

- Development of the Commission's Annual Report on Enforcement.
- Development of a North America-wide system to assist in compliance monitoring of transboundary movements of hazardous wastes.
- Cooperation in wildlife enforcement.
- Promote voluntary environmental compliance and environmental auditing.<sup>9</sup>

#### 2.1.1.1 Annual report on enforcement

Significant activity in late 1995 and early 1996 focused on the compilation of enforcement information for the Commission's first Annual Report, as required by the Agreement. Each country contributed information on its respective domestic enforcement programs and activities. This exercise has begun to stimulate discussion among the three countries on the comparability of enforcement and compliance statistics as the countries utilize different arrays of enforcement tools and methodologies for measuring compliance.<sup>9</sup>

#### 2.1.1.2 Transboundary hazardous waste shipments

The subgroup on Transboundary Hazardous Waste began to discuss development of a North America-wide system for tracking transboundary hazardous waste shipments. Such a system could help identify illegal hazardous waste shipments and compliance circumvention schemes, as well as hazardous waste manifest violations and other technical non-conformances; and might facilitate enforcement targeting and enforcement cooperation between government authorities. Such a system could also have additional benefits, such as expediting hazardous waste export and import transactions and industry reporting, and providing information useful in hazardous waste program planning, policy-making, public reporting, and emergency preparedness and response. The subgroup began to develop a project plan for design and implementation of such a system, referencing the U.S./Mexico transboundary hazardous waste system ("HAZTRAKS") as a possible starting point for a North America-wide system.

#### 2.1.1.3 Wildlife enforcement cooperation

The subgroup on wildlife enforcement, or the "North American Working Group on Wildlife Enforcement", identified as priorities for 1996 building improved communications and joint training courses focused on enforcement of the Convention on Illegal Trade in Endangered Species ("CITES") at border crossings. Programmed activities included training in CITES enforcement on the U.S./Mexico border, and training in Toronto, Canada on fur-bearing species.

Future training priorities include focus on birds, reptiles and hides identification, and the development of materials on the laws, policies and organizations responsible for wildlife enforcement to support cooperative initiatives.

#### 2.1.1.4 Voluntary compliance and environmental auditing

In September, 1995, the Commission Secretariat and Environment Canada joined Mexico and the United States in co-sponsoring a seminar for industries in the Juarez/El Paso area of the U.S./Mexico border zone on "Programs and Policies to Promote Environmental Auditing and Voluntary Compliance in North America. Attended by over 200 industry representatives, the seminar marked the first cooperative effort under Commission auspices to actively promote industry compliance with environmental laws. The seminar focused on environmental auditing as a means of both assuring compliance and identifying pollution prevention opportunities, and explored government policies to encourage voluntary compliance through environmental auditing. The Commission and the three governments sponsored a second seminar in Tijuana, Mexico in December, 1995, expanding the focus to include discussion of emerging International Standards Organization voluntary standards for environmental management systems (EMS) to implement industry commitments to environmental compliance and pollution prevention ("ISO 14000").

At both seminars, the governments and the Commission conducted intergovernmental consultations on their respective policies and programs in more detail, including their potential relationship to ISO 14000. As a result of these consultations, the subgroup on Environmental Auditing and Voluntary Compliance agreed to continue its dialogue on government responses to ISO 14000 in North America, and to develop additional geographic or industrial sector based cooperative efforts to encourage voluntary environmental compliance.

To inform such future cooperative activities, the Commission Secretariat launched a study of alternative mechanisms to encourage voluntary compliance. The study will explore existing efforts in the three countries to develop and implement voluntary compliance mechanisms and develop recommendations, after consultation with enforcement and compliance officials and private stakeholders.

#### 2.1.1.5 Additional enforcement cooperation priorities and opportunities

In addition to the subgroup activities, the Permanent Working Group agreed to pursue the following priorities: to share approaches to compliance data management; to publish a roster of enforcement and compliance officials to facilitate information and expertise exchange; to prepare a catalogue of existing training programs in North America pertaining to environmental enforcement and compliance; and to focus work on the detection of illegal shipments of ozone-depleting chemicals controlled by the Montreal Protocol. Other ideas for cooperation, subject to further dialogue, include subsector-based approaches to cooperation in enforcement targeting and compliance promotion, and the development of a North American protocol for cooperation in environmental enforcement investigations, including evidence-gathering and treatment of confidential information.

The Commission's broader cooperative work on substantive environmental problems (e.g., Commission Council priorities or cooperative work activities which do not pertain exclusively to enforcement) may present opportunities for future cooperative efforts in enforcement and compliance. For example, in October, 1995, the Commission Council adopted a resolution giving priority to cooperation in the management and control of persistent toxic substances, such as polychlorinated biphenyls (PCB's). Another Council resolution agreed to trilateral action to promote public access to environmental information. Initiatives such as these,

driven at the Council level, could provide useful foci for future cooperative work in enforcement and compliance. For example, cooperative enforcement targeting and compliance promotion activities could be geared toward implementation of regulations controlling persistent toxic chemicals or requiring reporting and community access to environmental emissions data.<sup>10, 11</sup>

### 2.1.2 Formal enforcement procedures

The Agreement's public complaint and dispute resolution processes complement the Commission's cooperative enforcement and compliance work program in guaranteeing the Parties' commitment to effective enforcement of their environmental laws. The citizen submission procedure provides an important opportunity for public participation in promoting effective environmental enforcement and compliance. By allowing private parties to request the Secretariat to develop a factual record shining a spotlight on a Party's alleged failure to effectively enforce its environmental law, citizens can participate directly in "bright-lights enforcement" of this central commitment of the Agreement. In October, 1995, the Commission published a set of guidelines to aid the public in preparing such submissions.<sup>12, 13</sup>

Meanwhile, the Secretariat reviewed and ruled on the first two such public submissions, and began review of a third petition. In the first submission, Biodiversity Legal Foundation alleged that appropriations legislation passed by the United States Congress in 1995 had the practical effect of preventing U.S. administrative agencies from carrying out their enforcement mandates under the Endangered Species Act respecting the classification of threatened and endangered species and critical habitats. The petitioner requested that the Secretariat of the Commission seek a response from the United States on the matter under Article 14 of the Agreement. Similarly, in the second submission, the Sierra Club alleged that U.S. appropriations legislation effectively suspended citizen enforcement of environmental laws with respect to old-growth forest and salvage logging, through a "rider" provision which limited judicial or administrative review of whether timber sales comply with environmental statutes. The Sierra Club petitioned the Commission to develop a factual record to determine whether this legislative provision amounted to a failure of effective enforcement by the U.S.<sup>14, 15, 16</sup>

The Secretariat declined to take the actions requested in both petitions, finding itself not empowered to act in response to legislative acts, as opposed to situations in which an agency charged with enforcing environment law fails to do so. In the Sierra Club petition, for example, the Secretariat concluded that the rider provision was new legislation which "becomes a part of the greater body of laws and statutes on the books." The Secretariat concluded that it "cannot characterize the application of a new legal regime as a failure to enforce an old one." The Secretariat was reluctant to involve itself in the essentially legislative function of assessing the prospective impacts of new legislation. The Secretariat noted that failures to enforce "are best construed to apply to the actions or omissions of the agencies and officials charged with enforcing environmental laws", and not the enactment of legislation. Thus, in both cases, although the Secretariat declined to conduct a factual investigation or seek a response from the implicated Party, its decisions provide valuable interpretive guidance on the scope of the Agreement's obligation that the Parties effectively enforce their environmental laws.<sup>17</sup>

The most recent submission, filed by the Centro Mexicano de Derecho Ambiental (Mexican Environmental Law Center) and el Grupo de los Cien (Group of 100), alleged failures in the implementation of Mexico's environmental impact assessment requirements with respect to a cruise-ship terminal development project located within a natural protected area. The submission, which was pending before the Secretariat as of the writing of this article, presents the Secretariat an opportunity to provide guidance on issues such as: application of the "effective enforcement" obligation to environmental impact assessment requirements; the application of

the notion of "persistent" ineffective enforcement as applied to individual development projects and to conduct beginning prior to the Agreement; and the transboundary nature of marine flora and fauna.<sup>18</sup>

In addition to the citizen submission procedure, the Agreement provides for formal arbitration, and possible sanctions, if one Party alleges that another is failing to effectively enforce its environmental laws. To date, the Parties have preferred to focus on working cooperatively to enhance enforcement capacity, rather than initiating formal allegations. The mere possibility of such a proceeding, in fact, and the pressure of "bright lights enforcement" created by the citizen submission process, appear at this stage to be effective tools in encouraging the Parties to work cooperatively to improve the effectiveness of their environmental enforcement and compliance efforts.

## 2.2 U.S./Mexico bilateral enforcement and compliance cooperation

While the U.S., Mexico, Canada, and the Commission were developing a North America-wide program of enforcement and compliance cooperation, the U.S. and Mexico continued to develop their cooperative bilateral relationship in this area through the U.S./Mexico Cooperative Enforcement Strategy Workgroup, one of six workgroups set up under the 1983 U.S./Mexico Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area ("La Paz Agreement"). Effective enforcement of and compliance with environmental laws in the U.S./Mexico border area is essential to ensure realization of each country's environmental goals, as well as to prevent transboundary environmental problems and unfair trade advantages resulting from lax implementation. EPA and Mexico's PROFEPA have worked to mutually enhance both countries' capacity to enforce and promote compliance with their respective environmental laws, and to resolve mutual environmental problems caused by noncompliance.<sup>19</sup>

In June, 1995, the two countries developed a Work Plan for 1995-1996, which called for substantial activities in the following areas: cooperation in detecting violations and targeting enforcement; cooperation in specific case investigations and sharing enforcement information; capacity building through training and technical consultations; enhancing interagency cooperation; and promoting voluntary environmental compliance through environmental auditing and pollution prevention.<sup>20</sup>

### 2.2.1 Recent and ongoing cooperative activities

#### 2.2.1.1 Cooperative detection of violations and targeting

EPA and PROFEPA have been working to enhance their capacity to identify likely violators for enforcement follow-up. HAZTRAKS, a binational system for tracking transboundary movement of hazardous wastes initiated by the U.S./Mexico Hazardous Waste Workgroup under the La Paz Agreement, has proven to be an effective tool for monitoring compliance. Information drawn from HAZTRAKS has enabled EPA, its state agency partners, and PROFEPA to identify potential violations. EPA and PROFEPA are exploring approaches to enhance their capacity to identify likely violators for enforcement follow-up, e.g., by supplementing data from HAZTRAKS with other useful information, such as data about a facility or its use of chemicals.

Input of local, state, and regional enforcement officials is essential in identifying priorities for cooperative targeted enforcement initiatives. To foster cooperative targeting among Mexican and U.S. federal, state and local enforcement authorities, EPA and PROFEPA established two pilot regional subgroups of the Cooperative Enforcement Work Group: one

for Texas/Chihuahua and one for California/Baja California. The subgroups will develop, propose, and implement cooperative initiatives to address identified local or regional environmental enforcement problems.

#### 2.2.1.2 Investigations and information-sharing

U.S. and Mexican federal, state and local agencies engaged in environmental enforcement are increasingly cooperating in the investigation of environmental cases with transboundary aspects. EPA and PROFEPA are exploring development of a protocol for cooperation in the development of evidence for enforcement cases of each country.

EPA and PROFEPA have been exchanging periodic aggregate data on enforcement activities in their respective jurisdictions, and have agreed to determine criteria for sharing more detailed information on specific completed enforcement cases.

#### 2.2.1.3 Training and technical consultations

EPA and PROFEPA have worked together to train hundreds of PROFEPA inspectors in Multimedia Inspection techniques. The course includes a "train-the-trainer" component to ensure its institutionalization by PROFEPA. The course was recently improved to include information for inspectors on pollution prevention technologies, and a new unit on wastewater discharge inspections to address the problem of cross-media transfer of pollutants from solid waste to wastewater. EPA and PROFEPA have begun to collaborate on more advanced training for Mexican inspectors, including training in field sampling and laboratory analysis, and in investigating environmental crimes.

In May, 1995, EPA facilitated and PROFEPA hosted a presentation of the international training course on the Principles of Environmental Enforcement and Compliance, attended by policy-makers from a diverse range of Mexican local and federal agencies. EPA and PROFEPA are now exploring future course deliveries which will include a "train-the-trainer" component, and are looking forward to collaborating in the delivery of this course to other Spanish-speaking countries in the Western Hemisphere.

EPA, its state agency partners, and PROFEPA, are improving interagency and binational enforcement cooperation through a bilingual training program for U.S. and Mexican customs and environmental inspectors on monitoring compliance with transboundary hazardous waste, pesticide, and toxic substance regulations. This training, which has already been presented at most major land border crossings, has proven to be an effective tool for building cooperative partnership among field enforcement personnel from diverse agencies on both sides of the border. Similar training is being developed regarding smuggling of ozone-depleting chemicals banned or restricted under the Montreal Protocol.<sup>21</sup>

In addition to these formal training exercises, EPA and PROFEPA have also engaged in less formal technical consultations on diverse aspects of environmental enforcement. These include enforcement data systems, environmental crimes, and administrative environmental enforcement. EPA and PROFEPA are planning a workshop to exchange perspectives on the legal and technical practicalities of environmental enforcement, and are exploring technical consultations on approaches to calculating economic penalties in enforcement cases.

#### 2.2.1.4 Voluntary compliance and environmental auditing

EPA and PROFEPA initiated outreach to U.S. maquiladora parents to encourage voluntary compliance with applicable laws and regulations, including through participation in PROFEPA's innovative environmental auditing program. This effort spawned two industry

conferences in the border area to promote voluntary compliance through strategies such as environmental auditing and pollution prevention, and trilateral consultations involving the U.S., Mexico, Canada, and the Commission, to exchange information about each country's policies to encourage voluntary compliance through environmental auditing. (See Section 2.1.1.4 above).

#### 2.2.1.5 Building networks of interagency cooperation

A diverse range of local, state, and federal law enforcement agencies are essential partners of EPA and PROFEPA in assuring environmental compliance and in building enforcement capacity through cooperation. The Enforcement Work Group has strived to develop a border-wide network of enforcement and compliance cooperation, among all relevant agencies at all levels of government on both sides of the border. This border-wide network forms a significant regional component of a North America-wide enforcement and compliance cooperation network, and many activities initiated bilaterally are now forming the basis for North America-wide cooperative work under the Commission's Permanent Working Group on Environmental Enforcement Cooperation. (See Section 2.1.1, above).

EPA and PROFEPA have committed to work to improve coordination among the local, state, and federal agencies on both sides of the border involved with environmental enforcement. Binational multi-agency training, local task forces, and supporting state enforcement activities through grant programs, have proven to be effective tools for building interagency cooperation. Creation of the regional subgroups for Texas/Chihuahua and California/Baja California will foster even greater cooperation among relevant federal, state and local environmental agencies in these regions.

#### 2.2.2 Border XXI: toward the 21st century

The U.S. and Mexico have begun to develop a new framework for border area environmental cooperation under the La Paz Agreement, to address the significant environmental challenges posed by rapid development in the border area as we approach the turn of the century. The new framework, dubbed "Border XXI", will seek to forge a partnership among border communities and state and federal governments on both sides of the border to work together in improving the border environment. To foster this partnership, as proposed by the U.S., the Border XXI program will emphasize the themes of public participation, decentralization of environmental decision-making to empower local communities and residents, and interagency coordination to maximize limited resources and avoid duplicative efforts. The Border XXI framework will seek to identify the resources necessary to achieve the environmental goals for the border area, and will strive to integrate interdisciplinary efforts related to environmental protection.

##### 2.2.2.1 Enforcement and compliance cooperation under Border XXI

Enforcement and compliance cooperation will continue as a major component of the framework for U.S./Mexico cooperation in the border area, alongside the work of the other existing La Paz Agreement Workgroups (Air, Water, Hazardous Waste, Emergency Response, and Pollution Prevention) and new initiatives in areas such as environmental public health, environmental information, and environmental education. Because enforcement and compliance are cross-cutting themes which are important for protecting all environmental media, close coordination and cooperation is needed with other cooperative activities to ensure that they

complement one another. The Enforcement Workgroup will continue to coordinate closely with and support the other La Paz Agreement Workgroups to enhance cross-cutting attention to enforcement and compliance.

In developing Border XXI, the U.S. has proposed a number of broad objectives for enforcement and compliance cooperation over the next five years, with specific implementing projects to be identified in annual work plans. The proposed objectives include:

- Measurably enhance compliance in the border area through aggressive inspection programs; targeting of inspections for maximum effectiveness; compliance actions and follow-up to ensure future compliance; and creation of an effective deterrence through sanctions which remove the economic benefit of noncompliance and through public communication of enforcement activities.
- Develop and implement cooperative targeted enforcement initiatives that address common environmental problems, in a manner which preserves respect for national sovereignty.
- Promote industry leadership in voluntarily achieving and demonstrating compliance, including through strategies such as environmental auditing.
- Develop sophisticated tools to monitor compliance.
- Promote pollution prevention solutions to compliance problems, in all enforcement/compliance related activities.

Enforcement cooperation would also be pursued in accordance with the broader proposed themes of Border XXI. For example, citizen involvement in the enforcement process provides an important avenue for public participation. In the U.S., citizens may initiate legal action to directly enforce most environmental laws. In Mexico, PROFEPA's procedures provide for follow-up investigation of citizen complaints about environmental compliance problems. In both countries, citizen input is an important source of information to assist the governments in responding to environmentally unsound behavior. The Enforcement Work Group will encourage the public, employing their respective domestic procedures, to work in partnership with the government agencies to enhance effective implementation of environmental laws.

Similarly, involvement in the Enforcement Workgroup will be an important avenue for state and local governments to help shape implementation of Border XXI, ensure responsiveness to the needs and priorities of local communities, and build interagency partnership and coordination. The recent creation of pilot regional geographic subgroups of the Enforcement Workgroup provides an important mechanism for state and local empowerment, and will help to ensure that interagency coordination occurs where it matters most — in the field, at the working level. In so building the enforcement and compliance network in the border area, the Enforcement Work Group will continue to coordinate its activities with broader, North America-wide enforcement efforts, and to identify bilateral initiatives which could benefit from trilateral cooperation.

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### 3 TOWARD A WESTERN HEMISPHERE ENFORCEMENT AND COMPLIANCE NETWORK

At the December, 1994 Summit of the Americas, the presidents of the democratic nations of the Western Hemisphere announced a Plan of Action which included a call for a new hemispheric Partnership for Pollution Prevention. The Plan of Action specifically identifies initial substantive priorities to include safe pesticide management, the gradual elimination of lead from gasoline, and the reduction of lead exposures from other sources. The Plan calls on international organizations such as the Inter-American Development Bank, the Pan-American Health Organization, and the Organization of American States, to play a major role in organizing and implementing Partnership activities.<sup>22</sup>

The Plan of Action for the Partnership calls for cooperative efforts in developing and improving environmental enforcement as a key aspect of the sound environmental management required to ensure sustainable development. The Plan of Action calls for the strengthening of implementation and enforcement of environmental protection frameworks, both through individual government action and through intergovernmental cooperation to facilitate information exchange, technical cooperation and capacity-building. In recognizing the importance of cooperation to reinforce domestic enforcement efforts, the Partnership for Pollution Prevention sets the stage for development of a Western Hemisphere network of environmental enforcement cooperation.

Prior to the Summit, in October 1994, the governments of Central America announced a new Alliance for Sustainable Development, and invited the international community to join them in achieving the goals of the Alliance. At the Summit in Miami, the U.S. accepted this invitation. In a joint communiqué called the "CONCAUSA Declaration", the U.S. and the Central American governments issued an action plan to work together to achieve the goals of the Alliance. The action plan contemplates cooperation between the U.S. and its Central American partners in establishing a network of cooperation to promote and enforce compliance with environmental legislation.<sup>23</sup>

#### 3.1 Western Hemisphere partnership for pollution prevention implementation

In November, 1995, EPA, in cooperation with the Organization of American States, the Pan-American Health Organization, and the government of Puerto Rico, hosted an Advisors Workshop and an Intergovernmental Technical Experts Meeting in San Juan, Puerto Rico, to organize the Partnership for Pollution Prevention. Although the Summit of the Americas Action Plan identified the 1996 Summit Conference on Sustainable Development in Bolivia as the time of reporting on progress in implementation of Partnership activities, it provided no mechanism to coordinate between government and non-government organizations or funding institutions to develop specific programs. At the Puerto Rico meetings, participants from approximately 25 countries, international organizations and multilateral development banks, with input from nongovernmental and industry organizations, developed a Framework for Cooperation, and identified initial priority projects.

##### 3.1.1 Framework for cooperation

The Framework for Cooperation developed in Puerto Rico calls for the Organization of American States to convene a meeting to establish a Task Force of involved international organizations to coordinate efforts and optimize resources for Partnership implementation.

Each country is called upon to designate a national focal point for cooperation. The Task Force will establish its own structure and work plan and report through government focal points. As of March, 1996, initial meetings of the Task Force had taken place in Washington, D.C., with participation of the Organization of American States, the Pan American Health Organization, the World Bank, the Inter-American Development Bank, the United Nations Environment Program, EPA and the U.S. Agency for International Development, and the Canadian International Development Agency.<sup>24</sup>

The Framework exhorts governments to cooperate to create and improve regional and subregional networks. The networks would include governmental and nongovernmental experts, and would exchange information and expertise for implementation of Summit-related activities. Information exchange would include electronic communications, follow-up meetings and other means. The Framework encourages reinforcing the Partnership with bilateral and multilateral relationships among governments and nongovernmental organizations to advance pollution prevention, and calls upon national focal points and international institutions to promote public participation.

The Framework specifically calls for strengthening of mechanisms for cooperation among governments to implement Partnership commitments, including "policy, legal and regulatory frameworks, institutional arrangements, economic instruments, enforcement and compliance." Finally, the Framework encourages the countries and international organizations to identify specific opportunities for capacity-building, training, and technical cooperation in each of these "cross-cutting" areas.

### 3.1.2 Substantive project priorities

In addition to initial development of a Framework for Cooperation, the Working Groups at the Puerto Rico Meetings outlined recommendations for priority project goals to address pesticides, lead, sustainable tourism, and water quality. Each of these priority themes provides opportunities for cooperation in the area of enforcement and compliance.

The Lead Working Group recommended the development and incorporation into legal instruments of national plans to eliminate lead from gasoline in the Americas by the year 2001. This activity will provide a Western Hemisphere focus on the phase-out of lead in gasoline, in follow-up to global discussions initiated in March, 1995 at an International Workshop on Phasing Lead out of Gasoline, hosted by the United States and Mexico under the auspices of the United Nations Commission on Sustainable Development. To implement the Working Group's recommendations, EPA is working with the U.S. Department of Energy, the U.S. Agency for International Development, and the World Bank, to develop a program for providing technical assistance to countries in the Americas in developing national plans to phase-out lead in gasoline. This effort appears to be taking shape as the first implementation activity on substantive priorities of the Partnership for Pollution Prevention.

The Pesticide Working Group recommended regional consultations on harmonizing of laws and regulations at high levels of environmental protection; the creation of information centers to facilitate information exchange, capacity-building, and assistance in government institution strengthening; and establishment of a "board" of interested country representatives to identify specific projects and assist in developing funding proposals. Projects recommended by the Water Working Group contemplated development and implementation of water quality criteria, exchange of experiences with implementation of legal, institutional and economic instruments for water resource management, including international river basins; management of water salinity in the Caribbean; and promoting institutional mechanisms for information-sharing, such as the Inter-American Water Resources Network of the OAS. The Sustainable

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Tourism Working Group recommended, *inter alia*, development of a sustainable management system, including through regulatory and enforcement mechanisms, for marine parks in Belize, Dominica, and Honduras.

### 3.1.3 Enforcement and compliance cooperation in the partnership

At the Puerto Rico meetings, EPA offered a concept paper on "Building Environmental Enforcement and Compliance Capacity in the Western Hemisphere". The paper envisioned a hemisphere-wide network of officials and experts to promote development of sound environmental laws and build enforcement and compliance capacity through regional and hemispheric cooperation. The network would consist of several regional sub-networks to focus efforts on regional problems. Its members would include representatives of all relevant government agencies, and of nongovernmental experts to provide perspectives of NGO's, academia, and industry, and ensure attention to citizen participation in the enforcement process. The paper suggested the following possible areas for cooperation:

- Capacity-building.
- Cooperative compliance promotion.
- Cooperative compliance monitoring.
- Cooperation on specific enforcement cases.
- Strategic priority-setting and targeting initiatives.
- Enforcement activity information exchange.
- Cooperative enforcement communications.

The objectives of the proposed strategy include: promoting sustainable development by ensuring that regulatory frameworks are capable of reaching their environmental goal; ensuring a level playing field of effective environmental enforcement as a basis for free trade; maximizing the efficiency of individual countries' efforts to build environmental enforcement capacity; and maximizing the deterrent effect of enforcement activity, by demonstrating a cooperative resolve to detect and respond to violations and promote voluntary compliance. The paper suggested that enforcement and compliance cooperation activities be incorporated into substantive priority projects (such as pesticides, lead, sustainable tourism, and water quality); but that they also be pursued through cross-cutting projects, not limited to the substantive priorities, to allow the network the flexibility to address, through cooperation, unique regional and subregional enforcement/compliance problems.<sup>25</sup>

The Puerto Rico meetings resulted in recognition of enforcement and compliance as a cross-cutting theme for hemisphere-wide environmental cooperation. The Framework for Cooperation specifically encourages cooperative activities to address cross-cutting themes, including through development and enhancement of networks of cooperation. The meetings also produced several substantive themes which present opportunities for developing enforcement and compliance cooperation components. In its subsequent participation in the Task Force on Implementation of the Partnership for Pollution Prevention, EPA has recommended the establishment of Working Groups to promote cooperative action in the substantive theme areas as well as on cross-cutting themes such as legal frameworks, enforcement and compliance, public participation, and pollution prevention.

EPA has taken some initial steps toward implementing the strategy on enforcement and compliance as proposed at the Puerto Rico meetings. Building on the network developed through the International Conferences on Environmental Enforcement and Compliance, EPA

began to develop a directory of contacts of legal and enforcement officials and experts, to support a hemisphere-wide network. EPA also developed an initial framework for a training course on environmental legislation and regulations, to be supplemented by interested countries or organizations. The training module, which will include a focus on enforcement considerations in drafting legal requirements, will supplement the existing international training module on the Principles of Environmental Enforcement.

At the Puerto Rico meetings, EPA proposed several specific projects to follow up this initial work. These include a hemisphere-wide delivery of the Principles of Environmental Enforcement and Compliance training, possibly in Mexico. EPA proposed a cooperative effort to supplement and further develop the training framework on environmental laws and regulations, and the development of case studies for both training modules to address identified Partnership priorities, such as pesticide regulation, lead exposure, and water quality. (An existing case study for the enforcement course, developed for the Third International Conference on Environmental Enforcement, covers sustainable tourism.) Finally, EPA proposed development of databases of environmental laws and regulations, agency and NGO organizational structures, and legal and enforcement contacts, to support the evolution of the Western Hemisphere network of environmental law and enforcement.

### 3.2 Regional enforcement and compliance cooperation in Central America

The Central American Commission for Environment and Development (CCAD), representing the seven governments of Central America, is taking a proactive approach to the development of a regional network of cooperation on environmental laws, enforcement and compliance. To implement U.S. commitments in the CONCAUSA Declaration to assist Central America's regional environmental cooperation efforts, the U.S. Agency for International Development (USAID) worked with CCAD and U.S. EPA to develop a Central American Regional Environmental Project (Proyecto Ambiental Regional para Centro America, or "PROARCA"), with components to address protected areas, coastal zone management, and environmental protection.

Under the Environmental Protection component, a regional comparative environmental risk assessment has been launched to reach consensus among key stakeholders on, and prioritize, the major pollution problems in the region. This effort will be supplemented by an assessment of existing environmental legislation in Central America and of institutional capacities to manage environmental risks. The workplan also envisions efforts to develop compatible national systems of environmental laws and standards among the Central American nations, including focus on the legislative basis for monitoring and enforcement. Finally, the Environmental Protection component calls for improving implementation and enforcement of environmental laws and regulations. This will include technical assistance and training to strengthen institutional capabilities, and compilation of statistics on enforcement activity. It will also include engaging the private sector in an open, managed dialogue to achieve concrete commitments to comply with environmental laws and regulations.

EPA's involvement in the PROARCA project is being funded by USAID, pursuant to an interagency agreement. Among the first activities, EPA facilitated a delivery of the Principles of Environmental Enforcement training in Belize in January, 1996, and is working to arrange future deliveries of this training in other countries in the region. EPA also participated in national assessments of environmental legislation in Honduras (December, 1995) and Nicaragua (February, 1996). EPA and CCAD are cooperating in the development of a Central American network of environmental legal and enforcement officials and experts, and are exploring

cooperative projects in areas ranging from training of inspectors to promotion of voluntary environmental compliance. Once it is completed, the regional comparative risk assessment will further inform the development of cooperative projects focused on enforcement and compliance.

#### **4 FUTURE CHALLENGES IN DEVELOPING THE WESTERN HEMISPHERE ENFORCEMENT AND COMPLIANCE NETWORK**

North America's evolving network of environmental enforcement cooperation can provide a ready model for the growth of similar regional and subregional networks throughout the Western Hemisphere, which would link together in a hemisphere-wide network of cooperation. Initial steps have been taken to develop the architecture of such a hemisphere-wide network. Enforcement and compliance functions are unique and cross-cutting: they are identifiable as a separate activity while at the same time they are fundamental to achieving a broad range of environmental program goals. Thus, cooperation should focus on the broad functions of enforcement and compliance. In addition, specific projects can be responsive to the priority substantive environmental problems identified on a hemisphere-wide and regional basis.

Among developing countries in the Americas, enhancing institutional capacity through technical assistance and training is a priority need. As the North American experience suggests, however, there is great opportunity for enforcement and compliance cooperation to go beyond capacity-building efforts. Exchange of ideas and experience benefits all countries in a region by expanding awareness of possibilities and policy options. Cooperation in areas such as compliance monitoring, enforcement targeting, enforcement case investigations, and environmental auditing, can achieve economies of scale in deterring violations and encouraging compliance.

The task of hemisphere-wide coordination itself presents a great institutional challenge. Although the institutional framework for cooperation has developed rapidly in North America, the outlines of a hemisphere-wide framework for cooperation have only begun to be drawn. Regional efforts, such as that of the CCAD in Central America, appear to provide the greatest hope for developing cooperative networks. Building a hemisphere-wide network which will ensure optimal cooperation at the operational level, therefore, appears to depend on the development of regional subnetworks, which will link together in a broader network for the Americas. These regional subnetworks, in turn, should be developed to enhance partnership between national and local governments, to ensure responsiveness to local problems and enhance cooperation among all entities which may provide assistance in detecting and responding to violations or promoting compliance.

One of the greatest challenges in establishing the Western Hemisphere network pertains to differing perceptions of the proper role of legal requirements and enforcement in achieving environmental goals. Many of the presentations at the Puerto Rico meetings suggested an emerging debate regarding traditional approaches to "regulation and enforcement" versus "economic instruments, incentives, and other alternative approaches." This characterization, however, presents a false dichotomy. First, although environmental law in the United States has traditionally involved "command and control" or "end-of-pipe control" strategies, many alternative approaches involve the promulgation of legal requirements, triggering concerns of enforcement and compliance. For example, economic instruments, such as taxes or emissions trading, often rely on self-monitoring and reporting of emissions or discharges. Such

requirements must be encoded into law, and enforced, to ensure that the economic approach achieves its environmental goals. Even some "voluntary" approaches involve notions of enforcement and compliance. For example, many of the same compliance monitoring concerns are involved regardless of whether behavior is proscribed by law, or imposed as a condition of some incentive, whether it be a government subsidy or a private loan.

Finally, regulatory/enforcement and voluntary approaches, if designed properly, are compatible and complementary, rather than mutually exclusive. Although some purely voluntary approaches will cause many polluters to improve their environmental performance out of rational self-interest or altruism, it cannot be assumed that all polluters will act rationally or altruistically. This is particularly so if the desired behavior change involves radical changes to institutionalized business practices or large short-term capital expenditures. Hence, voluntary incentives work best if backed up by baseline requirements and substantial certainty that sanctions will be imposed if noncompliance is detected.

A more legitimate concern, however, is whether the private sectors in developing countries have adequate tools and resources to achieve compliance with strict new environmental standards. While this issue was raised by Central American industry group participants in the Puerto Rico meetings, the compliance capacity of small or economically disadvantaged businesses has been a matter of significant debate within the United States for some time. In response to these concerns, EPA recently modified its traditional approach to enforcement to include an emphasis on promoting voluntary compliance, particularly targeted at small and medium-sized businesses. EPA's new program of compliance promotion is supplemented by enforcement policies which encourage environmental auditing as a means of assuring compliance, and provide incentives to small businesses to participate in compliance assistance programs. EPA is also engaging industry directly in dialogue on how environmental performance can exceed the baseline levels of protection achieved by mere compliance with environmental standards, while reducing overall regulatory burdens. At the same time, EPA is exploring new ways of recognizing industry for exemplary behavior which exceeds compliance. These efforts provide examples of how traditional enforcement might combine with positive incentives to change behavior to comply with environmental requirements.

## **5 CONCLUSION**

Much work needs to be done to consolidate the Western Hemisphere environmental enforcement and cooperation network. In North America, the U.S./Mexico border area is still a large environmental concern. Industry performance in this region remains a key test of sustainable development in the Americas. Coordinated trilateral cooperative projects are only just getting under way. Although great strides are being made, promoting interagency partnership among all relevant entities remains a challenge, as does ensuring appropriate public participation. In other regions of the hemisphere, many environmental laws and standards are only now being developed; and these laws are perceived as challenging traditional relationships between government and industry. Yet, drafting environmental regulations that are enforceable from the start is a key to achieving the intended goals of an environmental protection program. Although electronic communications promise to enhance communications and cooperation within the hemisphere-wide network, not all stakeholders are at the same milepost on the "Information Superhighway."

Notwithstanding these obstacles, in the two years since the Third International Conference on Environmental Compliance and Enforcement, an Americas-wide network of environmental enforcement and compliance cooperation has begun to emerge. While a hemisphere-wide institutional structure for this network has begun to take shape, substantial work has been done to form a coherent, multi-tiered institutional framework for a key regional component of that network, North America. Meanwhile, other key regions of the Hemisphere, such as Central America, have begun concerted efforts to organize regional networks. Clearly, the benefits of mutually enhancing the capacity for and deterrent effect of enforcement, minimizing trade distortions and transboundary environmental degradation, improving voluntary compliance, and ultimately improving environmental performance, will be well worth the hard work. Hopefully, the Fifth International Conference on Environmental Enforcement and Compliance will provide an opportunity to report on further progress in the evolution of enforcement and compliance cooperation in the Western Hemisphere.

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## **TOWARD ESTABLISHING A REGIONAL NETWORK IN THE WEST ASIA/ MIDDLE EAST REGION**

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### **SUMMARY**

This report sets the scene for taking the first steps in establishing a compliance and enforcement network in the West Asia/ Middle East region. After drawing attention to some basic considerations, the report describes the main characteristics of environmental management in the region with emphasis on compliance and enforcement. It ends by proposing the main points to be discussed in order to start establishing the network.

### **1 INTRODUCTION**

There is no network in our region for the exchange of information and experiences on compliance and enforcement. As we meet to discuss establishing such a network we need to place our deliberations today against a background of some basic considerations. These we need to keep in mind if our first steps towards establishing the network are to be based on a firm foundation. Briefly, let me touch upon four main considerations:

1.1 Our region is heterogeneous to a significant extent. We have densely populated states of rather limited resources, sparsely populated ones endowed with a wealth of natural resources, and a third group that lies somewhere in the middle. Populations vary from less than one million in some states to sixty millions in others. As might be expected in such a situation, the stages of development differ widely, as do the major economic activities.

1.2 While, twenty years ago, the general wisdom across the region was that environmental protection was a concern for the industrialized countries, national and regional priority was rapid development with considerable tolerance towards environmental impacts. Environmental worries were a long way down the line and can simply wait. This situation has been changing slowly, but steadily. All over the region, environmental concerns are moving gradually to the top of the list of national priorities.

1.3 The issue of environmental management has been addressed so far in a wide variety of approaches and institutional and legal frameworks. Government units responsible for the environment have taken the form of ministries, councils, departments, and sometimes supra-ministerial bodies. The concerned top levels of authority have ranged from ministers (of health, defense, interior) to councils of ministers and so-called higher councils. Some report directly to the head of state.

1.4 At the risk of making too drastic a simplification, the most commonly adopted approaches to environmental management had the following characteristics in common:

- Significant reliance on the command and control approach.

- Little involvement of the regulated communities in the drafting of legal instruments (laws, decrees, standards).
- Young, understaffed, underfunded, and underequipped, regulating bodies faced with the task of dealing with much larger and sometimes more sophisticated regulated communities.
- As might well be expected under the circumstances, regulations, procedures and standards were usually copied from other societies of different backgrounds, capabilities and conditions, and hence not conducive to enhancing the credibility of the young regulating bodies.

## **2 THE PRESENT SITUATION**

It is against this admittedly very sketchy outline of our recent history, and with full appreciation that there are exceptions where the situation is quite different from these generalizations, that we should look at some encouraging developments in the region over the last few years:

- There is now a general realization that the command and control approach, as it is being carried out, is failing to produce desired results.
- The issue of environmental management is being rethought, away from copying other models, to tailoring suitable approaches with full realization of the specificities of each society and institutional setup.
- One major consideration in designing appropriate systems, that has clearly emerged in many -if not all- countries in the region, is the need to bear in mind current value systems. The choice of appropriate tools for environmental management has to take careful note of this critical factor. In many cases, compliance is not the social norm, and enforcement capabilities are often weak, if not nonexistent.
- As a result, emphasis is slowly shifting from reliance on laws and regulations to in-depth analysis of the causes of non-compliance and definition of socially-acceptable enforcement actions when necessary.
- This has laid bare the defects in the legal instruments as one of the main causes of weak compliance. The search is now for other more effective tools for ensuring compliance within the overall framework of environmental management at the national level.
- At the level of society at large, dissatisfaction with the state of the environment and protests against flagrant abuses is becoming more vocal and in a few cases an effective element in bringing about change.
- At the level of the regulated community, more and more business enterprises are beginning to devote more attention and resources to environmental management at the level of the enterprise. The view is now spreading that this is good business -not only because it improves the image of the enterprise; but because it is also profitable. A few enterprises are now talking of the implications of the combination of the new GATT agreements and the ISO 14000 parts that will come out this year.

- Many countries are tapping new sources of technical assistance, foreign expertise, and even financial resources, in dealing with their environmental problems. Recently, this has moved beyond the “technical fix” to basic issues in environmental management, with compliance and enforcement fast becoming a new field of cooperation. This goes well beyond the usual organizational support, pollution prevention and control, and regulatory reform.

I trust that you agree with me that this thumb nail sketch confirms that this is an opportune moment for systematic study and emphasis on the issue of compliance and enforcement in our region.

### **3 HOW TO MAKE PROGRESS IN REGIONAL COOPERATION**

This Fourth Conference witnesses more participants from our region than any previous conference. Consequently, it is a unique opportunity for us to:

- Get to know one another.
- Exchange preliminary information on the current situation/ future plans to strengthen compliance and enforcement activities in our region.
- Identify and prioritize our common needs in the light of the above.

Next, we may — subject to your approval — move on to:

- Sketch the structure of a regional network and the functions it will perform.
- Identify national focal points, even though tentatively.
- Discuss, and hopefully agree on the location of a node.
- Specify a feasible set of objectives and mechanisms of operations for the next two years, including monitoring progress.
- Discuss mechanisms for communication and exchange of information.

I look forward to a very successful discussion that will hopefully be remembered in years to come as the first step on the order to achieving compliance and enforcement throughout our region and the role our network has played in this worthy endeavor.



## **ESTABLISHING INTERNATIONAL COOPERATION AND REGIONAL NETWORKS**

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### **SUMMARY**

This paper explains the benefits that are to be gained through international cooperation on environmental issues. The ways in which such cooperation can help policy makers and environmental regulators is described from the experiences of the United Kingdom as a Member State of the European Union. It is suggested that the lessons learned through these experiences are relevant to all countries.

### **1 INTRODUCTION**

We in the United Kingdom have just gone through a major reorganization of the inspectorates dealing with the compliance and enforcement of environmental legislation. From the first of April this year new Environment Agencies have been set up in England and Wales, in Scotland, and in Northern Ireland. These Agencies will have responsibilities for the control of certain kinds of pollution to all environmental media and will be the competent authorities for the implementation in the United Kingdom of much of the environmental legislation originating in the European Community.

The Agency for England and Wales comprises staff of the old National Rivers Authority, Her Majesty's Inspectorate of Pollution, and Waste Regulatory Authorities. It starts off with over 9000 staff with a wide range of expertise - from flood defense to the regulation of wastes from the nuclear industry. The complexity of the legislation and the industries regulated by the Agency would be daunting but for the fact that we are not alone. Not only do we have highly competent staff in-house, we can get advice and assistance from colleagues in the other United Kingdom agencies, and from government departments, consultants and academics.

But we would be foolish if our networking was limited to the United Kingdom. The Agency needs to tap into the knowledge and experience of environmental regulators throughout Europe, and worldwide, to help us do our job well.

This paper considers the benefits of networking from the perspective of policy makers and regulators. Although the detailed descriptions refer to Europe, the paper seeks to demonstrate that the principles have global relevance.

### **2 BENEFITS OF NETWORKING TO POLICY MAKERS**

To consider the benefits of networking to policy makers, let us start at the top, in United Kingdom terms, with a note from the Secretary of State of the Department of the Environment to the Prime Minister in August 1993. This stated:

*"We have done much to change the culture of (the civil service) in recent years. But there is one area where we need to do more. We need to encourage all Departments to be expert in their dealings with the rest of Europe.*

*If we are to be at the heart of Europe we need to make this change of culture across the whole of Government. Every Department needs to keep in touch with the earliest stages of policy formulation affecting its business, long before the Commission puts forward proposals. We also need to make sure that our officials are trained and properly prepared to deal with Brussels."*

A short history of the Community will provide an explanation of why the United Kingdom Department of the Environment needs closer links with Brussels and our partners in the European Union:

In 1957 the Treaty of Rome was signed establishing the European Economic Community. The essential objective of the Treaty was *"the constant improvement of the living and working conditions of the European peoples."*

No mention was made of environmental protection, but within a few years it was realized that common standards were needed to protect consumers in order to ensure the free circulation of goods among the Member States. Hence the first environmental legislation dealt with products - dangerous chemicals, motor vehicles, and detergents. This legislation was based on Article 100 of the Treaty of Rome which dealt with the harmonization of laws in Member States "as directly affecting the establishment and functioning of the Common Market."

The Treaty was amended in 1987 and the Amendment mentioned the environment. In fact, it identified a linkage between environmental protection and the quality of life and introduced a series of new Articles - 130r, 130s, and 130t - on the goals, means and procedures of environmental protection. Most legislation under these Articles needed the unanimous approval of the Environment Council; in other words, a Member State could veto a proposal even if all other countries were in favor.

The next major step was taken in December 1991 with the signing of the Treaty of Political Union in Maastricht. This requires that environmental concerns must be considered in the formulation of all policies of the European Community, and it extends the application of a "Cooperative procedure" to environmental legislation under Article 130r. This means, in essence, that no single country can veto a proposal under this Article. (However, Member States still have a veto in some environmental areas.)

The fact that most environmental legislation requires a cooperative procedure makes a big difference to the way that the United Kingdom deals with Europe. Without a veto, a country can influence proposals for new legislation only by gaining the support of other countries.

The expansion of the Community in 1995, when Austria, Finland, and Sweden joined, has meant that more countries need to be united to obtain a change in a proposal. So it is not surprising in the post-Maastricht Europe that the Department of the Environment is forging closer ties with similar Ministries in other countries.

### **3 BENEFITS OF NETWORKING TO REGULATORS**

What role, you may ask, do environmental regulators have in all this? Why does the Environment Agency, for example, need to coordinate with organizations in other countries? Again we shall recount some history:

The growth in environmental awareness from the original Treaty of Rome to Maastricht has been mentioned above. This growth was matched by a proliferation of environmental legislation by the European Community throughout the 1980s, over 200 environmental Directives and Regulations being adopted.

But what happened to this new legislation after approval by Council and publication in the Official Journal? Was it being enacted in all the Member States? How did different countries go about the processes of transposing EC legislation, setting standards, issuing permits for industrial process, implementing regulations, compliance checking, and enforcement? Were there weaknesses in this regulatory chain?

To answer these questions the Netherlands Ministry of Housing, Spatial Planning and Environment embarked, in 1991, on a survey of organizations in each Member State involved in the enforcement of environmental legislation. The survey investigated the different procedures for standard setting, permitting, compliance assessment and enforcement.

The results of the survey and subsequent actions were reported at the Third International Conference on Environmental Enforcement (ref. 1). In summary, the survey found inconsistencies in a number of areas, for example:

- Administrative procedures.
- Permits required.
- Technical standards applied.
- Charges made for permits.
- Public access to information.

Some of these inconsistencies were thought likely to impose unequal burdens on industry across the Community as well as unequal threats to the environment in different countries. The survey results were presented, in October 1991, to an informal meeting of Environment Ministers who agreed that

*“... it would be desirable as a first step to establish a Network of representatives of relevant national authorities and the Commission in the field of enforcement, primarily aimed at the exchange of information and experience in the field of compliance and enforcement, and at the development of common approaches at a practical level.”*

At a meeting of the EC Environment Council on 12-13 December 1991 the United Kingdom offered to host the first meeting of the Network during its Presidency. This meeting was held in Chester from 3-6 November 1992. Subsequent meetings of the Chester Network, as it was then known, were held in Copenhagen in May 1993 and at Steenokkerzeel (Belgium) in December 1993.

Some changes were agreed to in the terms of reference of the Network at Steenokkerzeel so as to incorporate certain requirements of the European Commission's Fifth Action Program. The changes gave the Network a wider mandate for the application and control of environmental legislation - focusing particularly on Community legislation, but also addressing that of Member States. It was agreed that the Network would also seek ways to ensure better implementation and enforcement by local and regional bodies, and that future plenary sessions would be jointly chaired by the Commission and the country holding the 'Presidency' of the European Union. At a subsequent meeting it was agreed that the modified Network should be known as the European Union Network for the Implementation and Enforcement of Environmental Law - the IMPEL Network.

## 4 STATUS OF THE IMPEL NETWORK

The IMPEL Network continues to provide opportunities for dialogue, at the European Union and national level, between policy-makers, environment inspectors and enforcement officers, allowing exchanges of ideas and experiences leading to the development of better enforcement structures.

During the past two years, plenary meetings have been held in Athens (May 1994), Munich (November 1994), Paris (June 1995) and Madrid (November 1995). These have considered broad issues related to implementation and enforcement and have provided direction to four Working Groups and an ad-hoc Group.

This period has seen the establishment and growth of the European Environment Agency - one of the most exciting environmental initiatives of the European Union. The Director of the Agency was invited to attend the Munich plenary and share his thoughts on the future role of the EEA and its possible interaction with the IMPEL Network. In his talk he foresaw the following areas of cooperation:

- Exchange of information on monitoring techniques.
- Helping to influence policy makers.
- Development of best practices.
- Reports on control of transboundary effects.
- Technical aspects of permitting.
- Eco-audit experiences.
- Statistical systems.

The Network looks forward to exploring these issues with the Agency. In addition, the Agency has agreed that IMPEL members can make use of the wide-area computer network that it is establishing across all Member States for the transfer of environmental data.

Much of the work of the plenary sessions is devoted to the receipt of reports from the various Working Groups, and to the identification of priorities for their future work. The progress of these groups in the past two years can be summarized as follows:

### 4.1 Working Group 1: the technical aspects of permitting

The Group has compared technical standards and pollution control technology for various types of facilities in each of the Member States. As a result, it has proposed technical guidelines which, though they have no official status, will provide useful guidance for regulatory bodies.

To date, the Group has looked at power plants, incinerators, refineries, and cement and glass production. Future work will consider the production of steel, aluminum, ethylene, varnishing compounds and chip board.

### 4.2 Working Group 2: on procedural and legal aspects of permitting

This Working Group exchanges information and compares experience on the permitting of industrial installations in the Member States. The discussions address specific pieces of EC legislation, such as Directives on large combustion plants, incinerators, or refineries, and horizontal issues, such as the cross-media assessment of the environmental impact of industries.

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The group also examines the application of EC legislation in Member States and the practical aspects of the regulatory process.

#### 4.3 Working Group 3: on compliance assessment and inspection

This Group has done a comparison of the inspection and enforcement arrangements in all the Member States. A report on its findings is being produced which will outline the legislation, organizations and the mechanisms for inspection, monitoring and enforcement and will include statistics on complaints, inspection visits and enforcement actions.

One of the Group's future tasks will be to examine the question of self-monitoring by industry.

#### 4.4 Working Group 4: on management of the regulatory process

One of the Group's key activities has been to set up exchange programs for inspectors to provide an in-depth understanding of the regulatory systems in each country. Four- or five-day exchanges have been hosted by the Netherlands, Denmark, Germany, France, the United Kingdom and Austria at which 30 or more inspectors from all Member States have participated. Other countries will be taking turns to hold such "exchange weeks". Besides the knowledge gained through the discussions on legislation and through site visits, the contacts established during these programs greatly facilitate the future exchange of information between inspectorates.

Working Group 4 is also preparing 'skills and management' manuals for inspectors covering both the regulatory process and facility inspections.

#### 4.5 Coordinators

In addition to the plenary sessions and the working groups, members of the IMPEL Network have established National or Regional Coordinators. These have an important role in the dissemination of information relevant to the Network among and within Member States.

## 5 UNITED KINGDOM EXCHANGE WEEK

At this point it may be worthwhile to expand upon the subject of exchange programs and briefly recount the experience of the United Kingdom in hosting one of these weeks in October 1995.

The main aim which the organizers of the United Kingdom program set themselves was to persuade other countries in the practical benefits of Integrated Pollution Control. To achieve this aim, a program of lectures, working groups, and visits to industries in the Teesside area in the North East of England was arranged.

Each day had a specific theme:

- |           |  |
|-----------|--|
| Monday    | – Principles and Legislation of Integrated Pollution Control(IPC). |
| Tuesday   | – Practical Application of IPC Principles and Legislation.         |
| Wednesday | – Links between IPC and other regulatory instruments.              |
| Thursday  | – Examples of practical successes of IPC.                          |

Two inspectors were invited from each Member State and also from Poland, Hungary and Romania. In addition, an inspector from Gambia, who was on a training mission with HMIP at the time, was able to attend. To give participants a chance to become familiar with the industries, copies of the permits were sent to them prior to the exchange week.

Small groups of 5 or 6 participants were established, each with a United Kingdom inspector as guide. These groups remained together throughout the week.

First thing in the morning following visits to industrial sites, syndicate groups met to discuss the authorization process and inspection practice they had seen the day before, and compare notes on how things were done in different countries. A plenary session would follow with presentations on the regulatory system in the United Kingdom. Then, before lunch the syndicate groups would meet again to look ahead to the afternoon's site visit. During these sessions, the United Kingdom inspector would draw attention to various aspects of the authorization for the industrial process to be visited.

The feedback from the syndicate groups was very positive, the small size being particularly welcomed as this facilitated the exchange of information among the participants and enabled them to question industrial staff whom they met during site visits. The intimacy generated within the groups also encouraged openness with the guide inspector, and frank discussions of how similar problems would be resolved in different countries. Another benefit of the week for the United Kingdom was the enthusiasm generated in the guide inspectors to learn more about regulatory processes in other countries. Of course, thanks to the exchange week, they now know friendly contacts in these countries.

## **6 AD-HOC WORKING GROUP ON THE TRANSBOUNDARY SHIPMENT OF HAZARDOUS WASTE**

Returning to the Working Groups of the IMPEL Network, there is one other that we have not mentioned - the Ad-hoc Working Group on the transboundary shipment of hazardous waste.

This Group was initially set up to carry out a project, now referred to as the first Transboundary Shipment Project, or TFS-1. In this, five countries came together to examine the international shipments of solvents and paint wastes from 28 companies. The countries were Belgium, Germany, Luxembourg, the Netherlands and the United Kingdom; Italy became a sixth participant halfway through. The project identified a number of illegalities, such as the unauthorized completion of shipment papers to indicate that containers had been inspected when, in fact, they had not. At least one of these infringements of regulation led to prosecution.

In view of the findings of TFS-1, an expanded project, TFS-2, was set up involving more waste streams and more countries. This has been a resounding success. It has:

- Agreed standard procedures for use by regulators for the inspection and identification of trans-frontier waste shipments.
- Coordinated an international waste transport check in which over 4000 lorries in 9 countries were stopped and inspected in a single week in June 1995.
- Established working practices with national and international police forces.
- Set up a task force to formulate proposals for the practical implementation of financial guarantees.

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- Investigated the options for electronic data exchange so as to facilitate faster and more effective information transfer between waste regulators in different countries.
  - Arranged bilateral cooperation on issues such as the pseudo treatment of wastes.
  - Made proposals to the European Commission for the establishment of a permanent technical officer forum to coordinate information exchange.

Discussions are being held between policy makers of Member States and the European Commission to establish a means for continuing the work of the two TFS projects.

## 7 PROBLEMS

Without doubt, the IMPEL Network has been a great success, but it can be improved:

The Plenary sessions need to define the objectives of the Network more clearly and provide a better steer for the Working Groups. There must also be a smoother continuity between succeeding meetings.

As for the Working Groups, some have found it difficult to get some countries to take part; the main problem being lack of funds. Collaboration among the different Groups could be improved and a concerted effort is needed to publish the reports they produce.

The National Coordinators also face problems. Their work in disseminating information within each Member State is fundamental to the value of the Network in terms of improving the professionalism of inspectorates. But this can be very time consuming and, as ever, resources are tight.

The Member States and the European Commission are working together on plans to improve the Network, particularly in the light of the Commission's intention to prepare, in 1996, a Communication to the Council of Ministers on the implementation and enforcement of Community environmental legislation. This work may redefine the overall context in which IMPEL operates and necessitate a restructuring of the Network. For example, until now the Network has focused on legislation linked to industrial facilities but it is recognized that, in due course, the range of activities could be extended.

In the mean time one small, but important, change has been agreed upon: the creation of a small secretariat to improve continuity between meetings and to ensure better coordination among Network members.

## 8 CONCLUSIONS

The paper has identified one of the reasons why the United Kingdom Department of the Environment needs to be involved in discussions in the European Community; that is, to influence policy and legislation at the initial development stages. The Community is unique in having supra-national authority, but we would argue that the same principle holds in all

international fora to do with the environment—governments of as many countries as possible should be involved from the very beginning in the drafting of international protocols, conventions, standards, etc.

If we in the United Kingdom fail to influence the drafting of European policies, and proposals are put forward which are contrary to our national opinion, we now have two choices - accept it, or work with other Member States to bring about changes. No longer do we or any Member State have a veto on most environmental matters. Working with other countries inevitably requires compromise, but that can lead to a greater common good.

The same is true for regions other than Europe: agreeing a common position among different countries helps to ensure that the world community takes account of this position.

When we addressed the practical aspects of compliance and enforcement in the European Union, we mentioned the benefits that European Inspectorates have gained from the IMPEL Network - it provides a forum for the exchange of ideas with other inspectorates and enables all to learn from each others' experiences. The resulting improvement in professionalism helps achieve consistency in the application of environmental legislation, which is good for the environment and provides a level playing field for our industries.

The same argument can be made for countries worldwide. There is much that we can all learn from each other, whether it be through bilaterals or through multi-national networks. The Environment Agencies in the United Kingdom are keen to play a full part in such interactions, within and outside Europe.

Even though the IMPEL Network has been very effective, this paper has referred to the need for improvements. This same need applies to all international networks - they must be able to develop, to meet new requirements while maintaining the basic principles of cooperation and exchange. And, of course, while fostering informal contacts between members; we are convinced that this is one of the greatest benefits, and pleasures, of international networking.

## REFERENCE

1. Volume 1 of the Proceedings of the Third International Conference on Environmental Enforcement, April 25-28, 1994, Oaxaca, Mexico, p 323: "The European Union Network of Environmental Enforcement Authorities"; D. Slater

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## ENFORCEMENT AND COMPLIANCE PROGRAMS IN CENTRAL AMERICA

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### SUMMARY

This paper provides an overview of environmental legislation in Central America. Regional legal instruments have been developed and have gone into effect at the initiative of the Central American Commission on Environment and Development (Comisión Centroamericana de Ambiente y Desarrollo) including Central American Agreements on biodiversity and protected areas, forestry resources, climatic change, and dangerous waste. More recently a political proposal has been made for an Alliance for Sustainable Development (Alianza para el Desarrollo Sostenible).

An incipient juridical framework exists at the national level. There are constitutional grounds for environmental protection. There are important gaps in the development of juridical instruments, especially regarding environmental sanitation matters; at present, the main challenge is the imposition of quality standards. In other cases, such as forestry resources, an effort has been made to promote an administrative organization with its corresponding procedures, but real results in the reduction of the deforestation rates have not been achieved.

The general conclusion is that environmental legislation in Central America is very weakly applied and has low compliance.

Four main obstacles to the actions that are needed to overcome this problem were deduced from legal advice given over the last two years to the Wildlife Program for Central America (Programa de Vida Silvestre), in the Regional Office for Mesoamerica (Oficina Regional para Mesoamérica), of the World Conservation Union, which are:

- The absence of institutional conditions that assure a Rule of Law.
- The growing poverty in the region.
- The scarce participation in the elaboration of juridical instruments.
- The weakening of the State.

## 1 REGIONAL ENVIRONMENTAL LAW

### 1.1 Central America environmental integration process

The Central American Integration Process continues its development and consolidation. It was organized and executed by the Central American Integration System. The Tegucigalpa Protocol instituted it and included among its objectives:

*"To establish concerted actions directed to preservation of the environment through respect and harmony with nature, ensuring a balanced development and rational exploitation of the region's natural resources, with the perspective to establish a New Ecological Order in the region."*

The system now has four clearly identified sectors:

- Economical Sector: Economical Integration System.
- Social Sector: Social Integration Commission.
- Educational and Cultural Sector: Educational and Cultural Commission.
- Environmental Sector: Central American Commission for Environment and Development.

The Central American Commission for Environment and Development has become the focal point for the development of action plans and strategies in the region, as well as the implementation of agreements concluded during periodic high-level political meeting, the "Central American Presidential Summits."

The Commission is formed by the leaders of the institutions responsible for the management of natural resources and the environment in each Central American country. The treaty setting up this body has been ratified by all regional states. The Protocol of San Salvador included the participation of Panama and Belize as formal members.

The Central American Commission for Environment and Development guided the preparation of the "Environmental and Development Central American Agenda", submitted at the United Nations Conference on Environment and Development. A major theme of this agenda is the development of regional legal instruments based on principles set out in the conventions signed at Rio.

This fact has produced the development of the international environmental law in Central America via regional conventions, by now in four areas:

- Biodiversity and the protection of prime wilderness areas.
- Management and conservation of forest natural ecosystems and the development of forestry plantations.
- Transboundary hazardous wastes.
- Climatic change.

This regional framework would aim to harmonize national regulations bearing on natural resources and the environment and promote sustainable development at national level, while maintaining common regional elements.

## 1.2 Central American environmental conventions

### 1.2.1 Convention on the conservation biodiversity and the protection of prime wilderness areas in Central America

Virtually simultaneously with United Nations Conference on Environment and Development, an "Convention on the Conservation Biodiversity and the Protection of Prime Wilderness Areas in Central America" was signed during the Presidential Summit in Managua, June 5, 1992. Its objective is the conservation of terrestrial and marine-coastal biological diversity. To further this purpose, it calls for the establishment and strengthening of eleven protected areas between two or more countries. It creates a Central American Council of Protected Areas to coordinate regional efforts to harmonize policies regarding the regional system of protected areas. As a mechanism for monitoring compliance with the Convention, the Central American Commission for Environment and Development, based on information obtained from national authorities, is called upon to submit annual reports to the Presidential Summit.

1.2.2 Convention on transboundary movement of hazardous wastes in the Central American region.

Following the United Nations Conference on Environment and Development, at the Presidential Summit held in December 1992, in Panama, the "Convention on Transboundary Movement of Hazardous Wastes in the Central American Region" was signed. "Hazardous waste" is defined by categories established in Annex I, and by characteristics listed in Annex II. Annex III lists activities with hazardous waste disposal. The Agreement declared the importation of hazardous waste an illegal and criminal act, subjecting it to sanctions pursuant to the national law. These regional agreements are open for membership by the Mesoamerican states. A reflection, in part, of the fact that Mexico participates as an observer in the Central American Commission for Environment and Development.

1.2.3 Central American agreement on climatic change

During the meeting of the Foreign Relations Ministers, in Guatemala City on the October 29th, 1993, the "Convention on Climatic Change" was signed by the following countries: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panamá.

It is based on the "United Nations Convention on Climatic Change", but its approach to this global problem intends to be from a Central American perspective. Its objective is the protection of the climatic system to insure food production and continuous economic development. It defines "climatic system", as the atmosphere, hydrosphere, biosphere lithosphere and their interactions as a whole.

The Convention contains general mandates. Many of the articles are declarations of principle, such as the necessity to maintain the climactic conditions for the conservation of the natural resources. It does not establish specific guidelines nor does it specify parameters. It reiterates the sovereignty of each countries' use of its natural resources, but only if these activities are not detrimental to the global climate. It promotes the evaluation of gas emanations which produce the greenhouse effect, the rational use of soils and watersheds, and sustainable agriculture that will not conflict with the conservation of the environment.

Emphasis is placed on scientific investigation. For example, learning the factors that regulate the climate, as well as strengthening the Meteorological and Hydro-meteorological Services.

Following the trend of preceding Regional Conventions, the executive agency is the Central American Commission for Environment and Development. The Regional Committee of Hydraulic Resources and Meteorological Services provides technical assistance to the Commission. They are in charge of elaborating an Action Plan for 1993-2005.

The Convention created the Central American Council on Climactic Change and is integrated by the Directors of the Meteorological Services; its purpose is the coordination of policies at the national level as an associate agency to the Central American Commission for Environment and Development. It becomes effective when at least four members ratify it, whereas preceding Regional Agreements required ratification by three signatories.

1.2.4 "Regional convention for the management and conservation of forest natural ecosystems and the development of forestry plantations"

The "Regional Convention for the management and conservation of forest natural ecosystems and the development of forestry plantations", was signed during the meeting of Foreign Relations Ministers, on October 29, 1993, and was later approved by the Presidents' Summit. It contains a regional framework for the management and conservation of natural forest ecosystems and the development of forestry plantations. Its objective is to avoid a change in the

use of land in forested areas and to recover those areas that have been deforested. This agreement is very interesting because it offers a set of principles that will guide institutional, judicial, and financial policies in pursuit of its objective.

It proposes the consolidation of a National and Regional System for Protected Wildlife Areas, the rehabilitation of degraded forests, forestry management of primary natural forests, reforestation programs, and the maintenance of inventories.

Regarding financial aspects it recommends the creation of specific funds, reinvesting mechanisms, credit assistance, important international cooperation and a modification to the National Accounts System to include depletion of the natural resources when calculating the Gross National Product.

It includes a chapter on public participation, where it recognizes the necessity to respect cultural diversity: indigenous population, communities, women, non-governmental organizations, and industrial sectors.

At the institutional level it recommends the strengthening of National Forestry Action Plans, the creation of Environmental Ombudsmen and obligatory Environmental Impact Assessment. The reason for this is that no legal framework for environmental impact studies existed in Central America until very recently. Consequently the institutional capacity for their reception, analysis and approval has been insufficient. This is an area that recently has begun to develop. In Panamá there is draft legislation, in Honduras the General Environment Law takes it into consideration. In Costa Rica it began fifteen years ago as a requisite for mining activities; this requirement has now been extended to other activities.

The Central American Forests Council is created, integrated by the Directors of Forestry Services from each country and national coordinators of the National Tropical Forestry Action Plans. It will come into effect once it has been ratified by three signatories.

The major concerns at the moment is to stop the change in the use of land in forested areas, which constitute 60% of Central American territory. Currently deforestation is one of the major environmental problems in the region. This is a consequence of inadequate management of other sectors, a lack of territorial order, the process of colonization and inefficient forestry management systems. For this reason the legal regulation of forestry resources, in an effort to conserve and restore them, is a common theme in the countries of the area. All Central American countries are reviewing and modifying their forestry legislation. Honduras and Panamá have already proclaimed new dictates in this aspect. Guatemala, Costa Rica and El Salvador have defined forestry policies, which provide a referential framework for forestry activity for the next five years. Here the State assumes a regulatory and supervisory role and the non-governmental sector is the executor.

These facts reflect that for the first time in the forestry sector, the policies and legislation of each country are trying to respond to the requirements established in the Diagnostics of the Forestry Situation.

In 1995, the Central American Council of the Protected Areas created by the "Convention on the Conservation Biodiversity and the Protection of Prime Wilderness Areas in Central America" and the Central American Council on Forests, constituted by the "Regional Convention for the management and conservation of forest natural ecosystems and the development of forestry plantations", merged into one body, with one Executive Secretary, in order to coordinate actions and to strengthen them.

As observers a few regional organizations were also incorporated, which represent different sectors of the civil society such as: women and development, indigenous-farmers of community forestry, forestry producers, local governments, forest professionals, Parliament Commissions for environment and development, regional members of World Conservation Union (CR/ONG's).

### 1.3 Central American environmental policy

On 12 October 1994, the Presidents of Central America Panama and Belize, met in Managua, Nicaragua, to hold the "Central America Ecological Summit for Sustainable Development". At this summit they adopted a holistic strategy for sustainable development in the region, called the Alliance for Sustainable Development.

This Declaration includes a definition of Sustainable Development which takes into account the characteristics of the Central American region, the principles in which this strategy is based, the requirements to allow it to happen, the objectives, and the tools.

Sustainable Development is defined as: "a process of gradual change in the quality of life of people that sees them as the center and the pivotal subject of development. This should be achieved through economic growth with social justice and through the transformation of the means of production and consumption patterns, based on the region's ecological equilibrium and vital support. This process implies the respect for regional ethnic and cultural diversity, at both the national and local levels. It also requires the strengthening and full participation of their citizens, in peaceful coexistence and in harmony with nature, without detriment to, and assuring the quality of life of future generations."

The guiding principles were defined as:

- A respect for life in all its expressions.
- The improvement of the quality of human life.
- The respect for, and sustainable use of, the lands, vitality and diversity.
- The promotion of peace and democracy as basic forms of human coexistence.
- The respect for the region's cultural pluralism and ethnic diversity.
- The attainment of greater degrees of economic integration among the countries in the region, and of these with the rest of the world.
- The intergenerational responsibility for sustainable development.

The bases on which it is grounded are:

- Democracy.
- Socio-cultural development.
- Sustainable economic development.
- Sustainable management of the natural resources and improvement of the environmental quality.

The strategy promotes the establishment of National Councils for Sustainable Development, as instruments of implementation. These will be with participation by the public and private sectors, and by the Central American Council for Sustainable Development, which is composed of the Central American Presidents and the Prime Minister of Belize.

The Alliance document includes an Annex, where the specific objectives by areas are: political, economic, social and environmental. In the latter, clear statements are included regarding to the need to harmonize and modernize the environmental parameters, the laws and the national entities that are in charge. The need to strengthen the capacity to regulate, supervise and apply the environmental norms is also underlined, as well as the need to typify the environmental offenses.

On this occasion, at the foot of the Masaya volcano, another document was signed, known as "The Masaya Volcano Commitments," with the official title of "Commitments Regarding the Environment and Natural Resources. Masaya Volcano, Nicaragua."

These commitments try to set up concrete actions, with well defined and stringent timetables, for the implementation of the Alliance for Sustainable Development.

#### 1.4 Convenio entre Centroamérica y Estados Unidos de América (agreement between Central America and the United States of America)

During the Summit of the Americas, the Convenio entre Centroamérica y Estados Unidos de América declaration was signed. This was the only document added to the Declaration of Principles and the Plan of Action. Thus, the United States of America became the first partner, from outside the region, in the Alliance for Sustainable Development. The Agreement defines a Plan of Action that establishes the individual responsibilities of each one of the governments of the United States and those of the Central America countries.

##### 1.4.1 Plan of action

In this Plan of Action the following elements are included:

- Conservation of Biodiversity: identification, preservation, and sustainable use of the unique biodiversity in the region.
- Energy: promotion of a clean and efficient use of energy.
- Environmental Legislation: strengthening of the legal and institutional frameworks of the instruments for implementation, and the improvement and harmonization of the environmental protection norms.
- Sustainable Economic Development.

In addition to the specific components of its Plan of Action, Convenio entre Centroamérica y Estados Unidos de América also voices general support for the implementation of the Alliance for Sustainable Development.

##### 1.4.2 Legislation

Environmental legislation has seen a strong thrust in the region. The national initiatives are taking shape within a Central American framework. The development perspectives found in regional and national legal instruments can be read as summaries of the main elements incorporated into the previously mentioned documents. The following perspectives are worth mentioning:

- The participation of civil society, including native communities, indigenous groups and other groups at the fringe of society, in the environmental decisions.
- The evaluation of environmental impact, with the definition of principles, minimum content, methodology, provision of consulting services, venues for consultation of civil society, and others.
- The management of natural resources:

###### a) Forestry Resources

Requirements and procedures are established for management plans, certification of timber-yielding products from sustainable forests, plans for the prevention of, fight against, forest fires, participation by municipalities and local authorities in the administration.

###### b) Biological Diversity

The conservation of this resource and the specific actions for this purpose are becoming an ever increasing relevance in the region. Since the signing of the Agreement on the Conservation of Biodiversity and the Protection of Prime Wilderness Areas in Central America, in June 1992, some Regional Projects have taken shape. These are the Central American Biological Corridor, which is a linkage of protected areas for the conservation and migration of species; the establishment of Centers of Biodiversity and Botanical Gardens; and the preparation of a Central American list of endangered species of wild flora and fauna.

In addition to these specific proposals, a space is being opened up for a more holistic proposal for conservation of the biological diversity. Proof of this is found in the agreements reached during the first week of February 1995, in Panama City, by the Interparliamentary Commission on Environment and Development.

It is acknowledged in them that, to fulfill what was approved in the Convention on Biological Diversity, the countries need to define Strategies and Plans of Action on Biodiversity. This must happen at both the national and regional levels, in order to evaluate this resource, and should include inventories, and knowledge and participation of civil society.

For this reason this Commission supports a diagnosis and proposals for a legal and policy framework that strengthen the conservation of biodiversity. Some of the recommended orientations include the exercise of sovereignty on Biological Diversity by the Central American States, the establishment of the intellectual property rights of over natural and cultural resources, and the right of access to information and technological transfer.

#### c) Hydrographic Basins

Policies and laws on the management and conservation of water resources are included, as well as studies on hydrographic basins.

- Instruments of territorial ordering to unify the classification of lands, and to set up strategies for the protection and recuperation of depleted soils.

#### a) Energy.

b) Central American energy policies and a master plan are included.

c) Transportation.

d) Control and prevention of water, air, and land pollution.

This section includes a plan for the elimination of lead in gasoline; regulations to control air pollution by mobile sources; regulations to monitor and control water, air, land, noise, and visual pollution.

### 1.5 Conclusion on legislation

A consensus has been development in Central America regarding the urgent need to strengthen the implementation of the environmental legislation, both at an international and national levels. For this reason all the documents contain, as a political commitment, the ratification of Regional and International Agreements on the environment and natural resources, and the development of the institutional capacity to make their implementation possible.

At the regional level environmental protection has been advancing rapidly. However, implementation of these advances within the national legal framework, has been at a much slower pace. In particular, the institutional response has also been slow reflecting the fact that national bureaucracies are significantly less enthusiastic about regional integration than political leaders.

We have witnessed a great effort to include the environmental concerns within the political agenda. What used to be a dream is now a fact, and we can observe it in each of the Declarations of the Presidential Summits. However, there has not been an improvement of the quality of life for people in Central America, where poverty has been increasing. Now, and hereafter, an additional effort is required to include the environmental aspects in the economic development model and make it become part of the concerns of the productive sectors; which seems the best way to improve the enforcement of and compliance with environmental law.

## **2 ENVIRONMENTAL LAW IN CENTRAL AMERICA**

### **2.1 History**

The history of environmental law as a Western legal concept in Central America stems from Civil Code, enacted in all Central American countries in the nineteenth century. Early cases decided under that Code include cases pertaining to hunting, fishing and forest resources, all of which were viewed as part of the property where they were found. Water resources, always of great value for community development, began to be regulated in the first-half of this century. Forest resources began to acquire value and importance in the second-half of this century. Given their strategic value, both mineral resources and the coastal zone have been declared to be in the public domain under the constitutions of the Central American countries.

The defining characteristic of the first stage of environmental law in Central America is compartmentalization. In this stage, the law has not taken into account that nature is composed of interrelated ecosystems, requiring integrated global regulation to preserve the environment as a whole. This systematic view is a product of the last twenty years, and has not yet developed sufficiently in Central America. Democratic states typically adopt legislation in response to established problems, resulting in uncoordinated regulation that mitigates rather than solves the underlying problems.

The second stage of environmental law in Central America is characterized by an effort to classify and systematize existing environmental law, revealing gaps in the law, overlapping institutional jurisdictions, conflicts of law, etc. Efforts to systematize the environmental laws have been underway for approximately the last seven years. Unfortunately, many of these efforts have been isolated projects, not undertaken in any coordinated fashion.

The current stage of environmental law development is characterized by a legislative effort to integrate and amplify existing law. In 1993, for example, Honduras approved a "General Environmental Law" which recognized the most advanced principles in the field. The legislatures of El Salvador, Nicaragua, Costa Rica and Panama are currently discussing proposed general environmental laws. This legislative effort to establish comprehensive environmental regulation, balancing conservation and development, to reorganize the administrative structure and to strengthen the means of enforcement of the law, sets new horizons for environmental law in the region.

Additionally, while legal scholarship has traditionally remained somewhat outside of the developments in environmental thinking, there are now a number of lawyers who have formed non-governmental organizations in each of the Central American countries, all seeking to assist in the enforcement of environmental law.

## 2.2 Constitutional treatment

All Central American countries, with the exception of Costa Rica, amended their Constitutions during the 1980's to specify the obligations of the State with respect to protection of the environment. Costa Rica finally amended its Constitution in 1994. The treatment of this issue in the various Constitutions is not identical, but the following general trends can be deduced:

- They tend toward the recognition of the right to enjoy a healthy environment as a human right (with greatest clarity in Panama, Nicaragua and Costa Rica).
- There is a significant controversy concerning the conceptual parameters of this human right, a subject of great importance, not only academically, but also practically, in order to define the bases on which this right can be exercised.
- They recognize that production and development must be based on rational use of natural resources and environmental conservation.
- They contain a declaration that the following resources are in the public domain: waters, coastal zone, continental shelf, air space, subsoil, and nonrenewable resources (hydrocarbons and minerals).

The Constitution of Nicaragua has the broadest sweep, declaring all natural resources to be the "national heritage."

The most sensitive subject is the protection and exercise of the human right to a healthy environment in the context of other equally well established human rights, such as the right to private property, and the right to free enterprise. This balance of individual and social rights is a daily struggle, framed not only by the applicable constitutional provisions, but also by the value accorded the individual in each society.

### 2.2.1 Guatemala<sup>1</sup>

The Political Constitution of the Republic of Guatemala, in Title II, "Human Rights," Chapter II, "Social Rights," contains two important references consistent with the trends noted above.

Article 64 (Natural Patrimony), Second Section (Culture) states as follows:

The conservation, protection and improvement of the natural patrimony is declared to be in the national interest. The State is responsible for the creation of national parks, reserves and natural refuges, which are inalienable. The law is to guarantee their protection and that of the flora and fauna which exist in them.

The Tenth Section (Economic and Social Regime) of Article 64 contains the following Articles that refer to the Public Domain of the State: Article 121 (Property of the State), Article 122 (Territorial Reserves of the State), Article 125 (Exploitation of Nonrenewable Resources), Article 126 (Reforestation), Article 127 (Regime of Waters), Article 128 (Use of Waters, Lakes and Rivers).

### 2.2.2 Panama<sup>2</sup>

The Political Constitution of Panama is the only Constitution in Central America that contains an independent, complete, chapter on the "Ecological Regime," contained within Title III "Individual and Social Rights and Responsibilities." It provides as follows:

**Article 114:**

It is a fundamental obligation of the State to ensure that the population lives in a healthy environment, free of contamination, in which the air, water, and foodstuffs, satisfy the requirements for the adequate development of human life.

**Article 115:**

The State and all of the inhabitants of the national territory are responsible for social and economic development that prevents the contamination of the environment, maintains the ecological balance, and avoids the destruction of ecosystems.

**Article 116:**

The State will regulate, enforce and apply in a timely fashion those measures necessary to guarantee that the use of the flora and fauna of the land, rivers and seas, the forests, land and waters, is carried out in such a way that precludes their depredation and assures their preservation, restoration and continued existence.

**Article 117:**

The law is to regulate the use of nonrenewable natural resources, with the goal of avoiding social, economic and environmental damage.

Moreover, the Constitution of Panama is the only Constitution in Central America that specifically addresses the prevention and control of environmental pollution. All other countries focus exclusively on the protection of natural resources.

Title IX, The Public Treasury, Chapter 1, "Property and Rights of the State," identifies the property of the State as follows: mineral resources, salt mines, mines, subterranean and geothermal waters, hydrocarbons, quarries and springs (Article 254); territorial waters, flowing and standing waters, their shores and banks, navigable waters, ports, deltas, air space and the continental shelf (Article 255).

Chapter 1 also includes an interesting provision not found in any other Constitution in Central America. This provision leaves open the possibility of the creation of additional public property by action of law, stating that, "in all cases in which private property is converted to public use, the owner of the property shall be compensated."

### 2.2.3 Costa Rica<sup>3</sup>

In 1994, Article 50 of the Political Constitution of Costa Rica was amended to establish the right to a healthy and ecologically balanced environment as a human right, as follows:

The State will ensure the overall well being of all inhabitants of the country, organizing and stimulating production and an adequate distribution of wealth.

Each person has the right to a healthy and ecologically balanced environment, and is empowered to denounce acts which infringe on this right and to recover damages for the harm done.

The State will guarantee, defend and preserve this right. The law will determine the responsibilities and the corresponding sanctions.

Prior to this amendment, the Constitutional Chamber of the Supreme Court of Costa Rica had already stated that this was a fundamental right, relying on other constitutional provisions, such as Article 21 which establishes the right to life and Article 89 which establishes as a cultural goal the protection of natural beauty.

Article 121 prohibits the State from relinquishing public control of hydroelectric resources, based on the nationalization of these resources which occurred prior to the drafting of the Constitution in 1949. Deposits of coal, oil, other hydrocarbons and radioactive minerals as treated in like manner.

Article 6, concerning territorial limits and sovereignty, creates a 200-mile zone of territorial waters, with the aim of protecting and conserving the natural resources of this zone, and ensuring Costa Rica's exclusive use of them.

#### 2.2.4 El Salvador<sup>4</sup>

The Political Constitution of El Salvador sets out the following in Article 117, concerning the public's interest in natural resources, Title V, "Economic Order":

The protection, restoration, development and use of natural resources is declared to be a public interest. The State will create the economic incentives and provide the technical assistance necessary for the development of adequate programs. The protection, conservation and improvement of natural resources will be the subject of special legislation.

Although there is no express reference to environmental rights in Title II, "Fundamental Rights and Guarantees of the Person," this provision does establish, as part of the right to public health and social assistance, the obligation of the State to control environmental conditions that can affect health and well-being. (Article 69)

The public domain is identified in several different articles. Article 103 establishes that the subsoil is property of the State and that the State may grant concessions for its exploitation. Article 84 establishes that the territory over which El Salvador exercises sovereignty and jurisdiction includes the territorial waters, air space, subsoil, continental shelf and the seas, seabed and subsoil up to 200 miles from the low tide line.

#### 2.2.5 Nicaragua<sup>5</sup>

The Political Constitution of Nicaragua includes the right to a healthy environment as a human right. Title IV, "Rights, Obligations and Guarantees of the Nicaraguan People," Chapter III, "Social Rights," Article 60 states:

Nicaraguans have the right to live in a healthy environment. It is the obligation of the State to ensure the preservation, conservation and remediation of the environment and of the natural resources.

Moreover, Title VI, "National Economy, Agrarian Reform and Public Finances," Chapter I, "National Economy," Article 102 establishes that,

Natural resources are part of the national heritage. The preservation of the environment and the conservation, development and rational exploitation of them are the responsibility of the State, which may enter into contracts for their rational exploitation when the national interest so requires.

Law 192, a partial reform of the Constitution passed in 1995 which precipitated a constitutional crisis in Nicaragua based on its rejection of the executive power, did not change any of the foregoing provisions concerning the environment.

#### 2.2.6 Honduras

In the Political Constitution of Honduras, the basic obligation of the State to conserve natural resources is located in the provisions pertaining to the economic regime. Nevertheless, in Title III, "Regarding Declarations, Rights and Guarantees," Chapter VII, "Regarding Health," Article 145 states: "The State will conserve the environment adequately to protect human health."

Title VI, "Regarding the Economic Regime," Chapter I, "Regarding the Economic System," Article 340 states:

The technical and rational exploitation of the natural resources of the nation are declared to be of public utility and necessity. The State will regulate their use according to the public interest and will establish the conditions under which they may be granted to the citizens. Reforestation of the country and the conservation of the forests is declared to be of national convenience and collective interest.

### 2.3. Jurisprudence

#### 2.3.1. Citizen rights and enforcement authorities

A practical consequence of the recognition of the right to a healthy and ecologically balanced environment as a human right is the procedural use of the established instruments for the protection of the constitutional right.

The Constitutional Chamber of the Costa Rican Supreme Court has been able to develop a substantial jurisprudence concerning the protection of the environment through the issuance of constitutional injunctions, issuing opinions concerning a wide variety of subjects related to the environment. In fact, the Constitutional Chamber had already recognized the right to a healthy and ecologically balanced environment as a human right before the Constitutional amendment expressly so stating was actually passed. In order to recognize this right, the Court relied on the relationships between various existing constitutional provisions as set out in the following paragraphs:

"Human life is inviolate." This is the constitutional principle from which arises the undeniable right to health, physical, mental and social well-being, human rights which are inalienably tied to the right to health and the obligation of the State to protect human life.

Moreover, from a psychological and intellectual point of view, the emotional state is also dependent on nature. Therefore, given the value of the countryside as a place for rest and leisure, it is the obligation of the State to preserve it.

Additionally, the Court has interpreted the concept of standing in Article 50 to include a private right of action for any citizen seeking to use established legal means to protect the environment, as paraphrased below:

With respect to the environmental right, the traditional narrow conception of legal rights must be abandoned. The right must be understood as universal, belonging to all people, rather than arising from limited notions of property ownership, rights or concrete actions that can be exercised under conventional rules of law. A legal action under this right can accordingly be described as an action in the "diffuse interest" (public interest). Therefore, all members of the public equally affected by any particular environmental wrong are empowered to bring an action to remedy that wrong.

The Supreme Court of Panama also issued an important opinion in 1994 establishing jurisprudence concerning the "diffuse interest." In that opinion, the Court recognized the standing of the National Association for the Conservation of Nature, a non-governmental organization, as a party which could oppose a logging permit. The National Association for the Conservation of Nature presented an opposition before the National Institute of Renewable Natural Resources, in which they argued that logging was not permitted in the area in question.

In the opinion, the Court expressly recognized the existence of diffuse interests or rights, defined as "those rights whose holders are indeterminate, that have a supra-individual character, that are indivisible under law and where there is no legal relationship between the holders of the rights. These rights deserve the protection of legal process, and the jurisdiction of the Court should be interpreted broadly in these cases.

The Court concluded that The National Association for the Conservation of Nature, an organization created specifically for the public purpose of conserving nature and the environment, had standing to oppose a logging concession and had the right to file an administrative complaint seeking the nullification of the concession and the right to recover damages, all based on the consideration that the alleged wrongful act harmed the "diffuse interests."

The growing interest in environmental problems and the increase in the number of organized groups seeking resolutions to those problems suggests that there will be greater citizen participation in demanding the enforcement of already existing environmental laws. In addition to the daily pressure brought to bear in Central America, such as communities demanding potable water and responses to the problem of solid waste, etc., the public will begin to exercise its established procedural rights. It is here that the administration of justice will play a crucial role in the near future.

This growing public interest in the search for solutions to environmental problems will be strengthened by the enactment of the general environmental laws currently under discussion in all of the Central American countries, which have as one of their aims the promotion of public participation in environmental issues.

This objective is one of the general principles identified above as characterizing environmental law, and is growing stronger all the time. This is reflected in the Rio Declaration, which states in Article 10: "The best method of dealing with environmental questions is with the participation of all interested citizens at all appropriate levels."

### 2.3.2 Honduras

The General Environmental Law of Honduras is a good example of this approach, given that it is the most recent and comprehensive legal instrument addressing environmental issues in Central America. This law contains a public right of action:

A public right of action is recognized in judicial and administrative matters in order to obtain sanctions against anyone who contaminates or degrades the environment and damages natural resources.<sup>6</sup>

This action has the following characteristics:

- It can be brought by any person. Consistent with the “diffuse interest” theory discussed above, standing does not require that there be a subjective personal interest or right implicated.
- The objective is to denounce (file a complaint). Nevertheless, a serious limitation or restricted interpretation may result if the emphasis is placed on the mere filing of the complaint without adequate attention to the resolution of the underlying issue in the continued litigation. Public actions of this nature promote greater participation in the initial complaint stage and in the subsequent proceeding.
- Acts subject to protest include polluting acts or activities.
- They must be brought before the proper authorities. The Central American countries have a wide range of institutions in the environmental area, with occasionally overlapping expertise and jurisdiction. This may present an obstacle to the exercise of the right of public action.
- A case must be officially opened in order to bring in evidence to prove the allegations and to adopt the necessary remedial measures.

Section III of the Regulations under the General Environmental Law establishes the following proceedings: the investigation must be initiated within five days, the investigation must be completed within one month, and a finding that there has been no violation of law may be appealed by any citizen.

### 2.3.3 Nicaragua

Article 179 of Title XV, “Regarding Administrative, Civil and Penal Sanctions,” of the General Environmental and Natural Resources Law Project of Nicaragua identifies the following characteristics of an environmental action:

The following are entitled to bring action:

- All Nicaraguan citizens.
- Registered environmental organizations.
- Representatives of State agencies responsible for Natural resources, including municipal authorities and autonomous governments.
- The Attorney General.

The intent is to increase the participation of all sectors of society in the enforcement of the law. The action must be presented before the authorities or judge of the location where the affected resource is located.

Liability is based on an objective standard, without regard to intent. Liability is established upon a showing of proof of damage and the identity of the responsible party, without the need to analyze that party’s subjective intent. The only defense is that the harm was caused either by the sole fault of the victim or by a third person for whom the accused is not responsible. The law also provides for joint liability, the liability of legal entities, and the payment of compensatory damages.

These brief commentaries indicate that the reinterpretation of traditional legal forms, such as the expansion of the concept of liability, will increase public participation and render the role of the administration of justice more relevant.

#### 2.4 Administrative organization<sup>7</sup>

The form in which the State is organized to respond to environmental issues has been influenced by the established model of development.

During the last 60 years, following an economic model based on agricultural exports, the Ministries of Agriculture and Livestock obtained control over the exploitation of natural resources. Gradually, agencies were created corresponding to each of the resources, each with a utilitarian perspective: the Division of Fishing Resources (for the exploitation of marine resources), the Office of Wildlife (for continental hunting and fishing) and the Forestry Office (for timber exploitation).

Although the names vary between countries, ("Office," "Division," "Department,") the reality is the same, i.e., administrative agencies charged with the exploitation of a specific resource on a compartmentalized basis. These agencies typically have neither an integrated vision of ecosystems nor policies based on sustainability.

In the 1980's, the economic model emphasized the reduction of imports and a concomitant increase in exports, resulting in tremendous stimulation of the industrial and agro-industrial sectors. At the same time, the conservationist movement was gaining strength, which influenced the transformation of the various agencies from autonomous institutions into parts of the existing state ministries or secretariats, changing their focus from exploitation to conservation. Various protected areas began to be established at this time.

At the present time, the grave deterioration of natural resources and environmental degradation is so obvious that the public is demanding action on the part of the government, and the responsibility of the government to take action has been established as a constitutional obligation. The compartmentalized agencies in charge of environmental issues have been strengthened and transformed into official government organs, including for example, the Secretary of the Environment in Honduras and the Ministry of the Environment and Natural Resources in Nicaragua. Legal projects are underway to develop comprehensive environmental regulations and to establish the functions and otherwise strengthen the institutions involved. Notwithstanding this, the Ministries of Agriculture and Livestock, Industry and Commerce continue to exist, demanding greater coordination and continuity in the government policies to achieve sustainability.

##### 2.4.1 Guatemala

In Guatemala, the National Protected Areas Council is the agency in charge of regulating the use and conservation of wildlife. It is organized as follows:

It reports directly to the President of the Republic.

The Council is composed of 14 representatives of the following institutions:

- National Commission on the Environment.
- General Forest and Wildlife Administration.
- Guatemalan Institute of Tourism.
- National Institute of Anthropology and History.
- Center for Conservation Studies.
- National Institute for Agrarian Transformation.

- Office of Control of Nation Reserve Areas.
- National Association of Municipalities.
- Friends of the Forest.
- Technical Education Board.
- Defenders of Nature.
- National Urban and Rural Development Board.
- One representative from the Committee of Associations of Commercial Agriculture, Industries, and Finance Institutions.
- One representative from the non-governmental conservation organizations that will be created in the future and registered with Consejo Nacional de Areas Protegidas.

This form of organization, intended to encourage greater public participation, has produced a significant obstacle to the functioning of the Council, i.e., it is difficult to obtain the quorum required for a meeting. Decision making is a lengthy process, and is subject to appeal before the Ministry of Agriculture, Livestock and Foodstuffs. Some merely mechanical issues such as preparation of the calendar of the agency are subject to the approval of the Congress of the Republic.

#### 2.4.2 Honduras

There are two Secretaries of State in Honduras with related jurisdictions: the recently created Secretary of State in the Office of the Environment, and the Secretary of Natural Resources.

The Secretary of Natural Resources has responsibilities in the areas of agriculture, livestock, forests, mines, hydrocarbons, water resources and fisheries. The Honduran Corporation for Forestry Development is an executive institution whose Protected Areas and Wildlife Department is supervised by the Ministry of Natural Resources.

Secretary of State in the Office of the Environment has coordination functions rather than executive responsibilities. It was created under the General Environmental Law of 1993. It is responsible for carrying out environmental legislation, formulating and coordinating in an integrated manner national policies concerning the environment, monitoring to ensure that these policies are carried out, and coordinating public and private institutions. It has a Consultative Board, composed of the Subsecretaries of State of the Offices of Planning, Coordination and Budgeting, Natural Resources and Public Education, and representatives of the Association of Municipalities, Institutions of Higher Education, the Federation of Non-governmental Environmental Organizations, the Honduran Private Business Board, organizations of workers and farmers. It also has a Technical Advisory Committee.

As an example of the dispersion of institutional authority, the Environmental and Developmental Action Plan assigns the following aspects of watershed management to the indicated agencies and institutions:

- The Secretary of Communications, Public Works and Transport handles channelization projects and the protection of banks.
- The National Energy and Electrical Enterprise handles water resources for the production of energy.
- The Honduran Corporation for Forestry Development handles forestry management plans for the conservation of watersheds.

- The National Geographic Institute handles the preparation of hydrogeologic maps.
- Financial and technical agencies such as the Center for Tropical Agronomy Research and Teaching and the Food and Agriculture Organization of the United Nations are also involved.

Notwithstanding the number of institutions involved in watershed management, the majority of watersheds are seriously degraded from their highest reaches, as a consequence of a lack of available water for various uses and frequent natural disasters such as droughts, floods and erosion of the soil.

#### 2.4.3 El Salvador

In El Salvador, since the creation of the National Environmental Board in 1991, the Executive Secretary has been responsible for preparing environmental policy proposals and coordinating and supervising their implementation. The Board is comprised of the Ministers of Agriculture and Livestock, Public Health and Social Assistance, Justice, Treasury, Public Works, Planning, Economy, Defense and Public Security, Education, Interior, Labor and Foreign Relations. Finally, a representative of the Salvadorean Municipal Development Institute is on the Board.

The Executive Secretary is the entity responsible for coordinating and monitoring environmental policies and strategies issued by the Board to ensure their implementation as a means of fulfilling the established goals of defending natural resources and controlling environmental contamination. One of its first actions was the preparation of the Environmental Agenda and Plan of Action.

Nevertheless, as in the rest of the Central American countries, there is "institutional dispersion and fractionalization, administration of a resource by multiple institutions, resulting in jurisdictional conflicts, duplication and rivalry with respect to the use and care of the resource."<sup>9</sup>

#### 2.4.4 Nicaragua

In Nicaragua, the Ministry of the Environment and Natural Resources has the legal capacity to regulate the use of the natural resources of the country. This institution, which became a Ministry in 1993, was formerly an autonomous legal entity with an independent jurisdiction over its own resources. It has unified a number of dispersed agencies, among them the General Administration for Renewable Natural Resources, formerly located in the Ministry of Livestock Development.

#### 2.4.5 Costa Rica

In Costa Rica, there are two principal relevant institutions, the Ministry of Natural Resources, Energy and Mines, responsible for renewable natural resources, and the Ministry of Health, through the General Administration of Environmental Sanitation.

The Ministry of Natural Resources, Energy and Mines is composed of the National Park Service and the General Administrations of Forestry, Wildlife, Geology and Mines. To achieve consolidation of these functions, it is currently necessary to reinforce its mechanisms of internal coordination in an equitable manner.

The discussion of watershed management in Honduras, illustrating the problem of scattered institutional authority, is equally applicable to Costa Rica. Watershed management in Costa Rica is accomplished through a large number of different institutions, with overlapping jurisdictions, and no clear means of coordination between them. Moreover, these institutions have different structures; some are Ministries, others are autonomous institutions or local governments. These institutions include the following:

- The National Electrical Service, which regulates the use of public waters, and grants concessions for their use.
- The Costa Rican Institute of Aqueducts and Sanitary Sewers, which supplies potable water, collects and removes sewage, and operates the system of storm sewers.
- The National Subterranean Waters, Irrigation and Drainage Service, which is responsible for the development of farming through its irrigation and drainage systems.
- The Costa Rican Electricity Institute, which is responsible for the development of hydroelectric energy. The Ministry of Natural Resources, Energy and Mines, which is responsible for watershed conservation.
- The Municipalities, which are responsible for the provision of potable water and the removal of used water AQUAS SERVIDAS.

#### 2.4.6 Panama

In Panama, the National Institute of Renewable Resources is relatively new. Created in 1986, its functions are centralized. It is an autonomous legal entity with its own resources. It has a board of directors composed of nine representatives:

- Minister of Planning and Economic Policy, the Vice Minister presides.
- Minister of Government and Justice.
- Minister of Education.
- Minister of Agricultural Development.
- Minister of Commerce and Industry.
- A representative from the conservation groups.
- A representative of the Union of Industrial Workers.
- A representative of the Association of Employees of the Institute.
- A representative of the loggers' union.

It is the obligation of the Director General, who is responsible for the technical and administrative administration of the Institute, to designate and remove the executive body.

#### 2.5 Legal regulations

The environmental laws in Central American are totally scattered. Natural resources are regulated in a compartmentalized manner and regulations are promulgated based on different uses of the same resources resulting in overlapping jurisdictions and limited instruments of control and application.

The law suffers from deficiencies, inconsistencies, duplications, and superimpositions with respect to its substance. Regulations have not been promulgated for the majority of the laws, presenting legal gaps in decisions and regulations. Regulations concerning resources are scattered, creating institutional competition and turf battles with respect to resource management, rather than working together to strengthen environmental protection. Some laws are very general, others refer to regulations that were not approved in a timely manner, which makes application of the law difficult.<sup>9</sup>

### 2.5.1 Protected areas, forest resources and wildlife

The regulations concerning protected areas, forest resources and wildlife have principles in common, but the instruments for their rational use are different. Nevertheless, in Central America, due to the pressure to develop environmental laws, there are common regulations.

In El Salvador, Nicaragua and Panama there are no integrated laws regulating protected areas. "The majority of the existing declarations have responded to political pressures of the moment. There is no legal definition of "protected area" nor is there a definition of what should be the categories for such areas."<sup>10</sup>

There is a regional trend to revise the policies concerning protected areas based on the Convention for the Preservation of Biodiversity and Protection of the Priority Wild Areas in Central America. There are also initiatives promoting proposed legislation in each country to reform the law concerning protected areas. The objective is to conform the law of protected areas to the actual circumstances. There is also a desire to make the categories of management and use uniform. One of the most controversial subjects is whether and how private activities may be carried out inside areas in the public domain.

Forest resources have been the object of legislative attention since the middle of this century. The law and institutional coverage of this issue are ample. Some commentators are of the opinion that there is excessive regulation of forestry issues, interfering with both the use of this resource and its conservation.

In Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica there is proposed legislation to reform the existing laws.

On February 3, 1994, Panama approved Law No. 1 "which establishes the Forestry Law in Panama and makes other provisions." On November 23, 1992, Panama approved Law No. 24, "which establishes incentives and regulates the activity of reforestation in the Republic of Panama." This is the most recent forestry legislation in the region.

There is also a Regional Convention for the management and conservation of natural forest ecosystems and the development of forest plantations, signed by the presidents of the Central American countries on October 29, 1993.

With respect to wildlife, Costa Rica, Panama and El Salvador have general wildlife laws. These laws incorporate a focus on management of the resource for its conservation in the context of regulating hunting and fishing as a use of wildlife. They also regulate other uses such as animals raised in zoos, scientific collection, and other activities such as the import and export of wild species, the introduction of exotic species and taxidermy.

In Nicaragua and Guatemala there are scattered provisions in the forestry regulations concerning protected areas and in the 1956 and 1969 hunting laws.

The principal problem with respect to wildlife is the low perceived value of this resource. Wild plants, excluding forest species, have not been subject to regulation, and have not been assigned to the jurisdiction of any particular agency.

There has always been a close relationship between the administration of protected areas and wildlife, which has resulted in shared jurisdiction over both resources within the same agency. Perhaps the primary result has been the failure to protect wildlife outside of protected areas.

There is no clearly defined concept of wildlife. It could be deduced that the concept is implicitly restricted to the larger vertebrates. This is reasonable, given that the regulations primarily address hunting and fishing.

Each of the countries in the region administer continental and marine wildlife separately. Marine wildlife is regulated in each Central American country by a law concerning marine hunting and fishing, dating from the 1950's. The object of this law is the exploitation of marine resources, pursuant to a licensing system. Methods of fishing are regulated in some cases, but controls are generally weak, as are the norms and policies established for the conservation of the resource.

It is very rare that any country (developed or developing) achieves efficient use of the seas. Like the land, the sea is a multiple-use resource, which provides food, transport, minerals and quarries, the production of oil, recreation and elimination of wastes. But contrary to the land, there are few efforts intended to regulate this multiple-use.

The organization of the administration of marine wildlife is even more complicated than the regulation of continental wildlife. Administration is through decentralized and centralized autonomous institutions with jurisdictions over specific resources. These institutions make no effort to operate in an integrated manner, resulting in duplicative and conflicting efforts and dispersion of resources.

The following charts, setting out the existing law on protected areas, forest resources and wildlife summarize the legal norms applicable to renewable natural resources. As noted, these laws are oriented to resource exploitation, the instruments of control and application are very weak, and the focus is on specific sectors.

To avoid the errors of the past, a legal standard should be enacted which allows the use of resources, but which also guarantees their conservation, with an institutional structure sufficient to exercise adequate control. Such a standard should be based on parameters of renewability and respect for those species which may not have current economic value, but which may acquire such value in the future. This is the heart of the concept of sustainability, which seeks to not foreclose the development options of future generations.

#### 2.5.2 Water resources

The grave problem of administrative dispersion in relation to environmental competencies and jurisdictions over natural resources is manifested even more clearly with respect to water resources. Although this issue is discussed with reference to Honduras and Costa Rica, the situation is unfortunately similar in the rest of the countries of the region.

Many laws and regulations are addressed to the use and management of water ... but there is no law which combines the various aspects of water management, just as there is no law that regulates water quality.<sup>11</sup>

#### 2.5.3 Conclusions

There are defects, gaps and duplications in normative texts, but the major problem is a legal structure that has not been applied, not by private individuals and not by the State. The real challenge is to ensure the application of existing law, through respect for the law on the part of the citizens and by the application of it by public institutions.

### 3 REFLECTIONS ON THE ENFORCEMENT AND COMPLIANCE OF ENVIRONMENTAL LAW IN CENTRAL AMERICA

#### 3.1 A concrete experience: the wildlife program for Central America

Since 1993, legal and institutional assistance has been provided to the Wildlife Program for Central America, of the Regional Office for Mesoamerica, of the World Conservation Union. It has been a challenge to be able to work on wildlife management, with the objective of improving the quality of life of the people, especially with the most impoverished sectors of the society. An interdisciplinary work team has been consolidated. Environmental law is characterized for being interdisciplinary and transectorial. We have had to pass over from the theory to the practice. The professional and personal enrichment has been enormous and important.

This final part of the work, is centered exclusively on the most relevant aspects of this experience, trying to extract some lessons that can be useful to the Law. The characteristics of the World Conservation Union, as a regional institution of the Program where assistance is provided, the lessons learned from the Demonstration Projects and a general conclusion on the most important aspects to be taken into account in the development of effective and efficient juridical instruments will be briefly presented.

##### 3.1.1 The wildlife program for Central America, of the regional office for Mesoamerica of the World Conservation Union

The World Conservation Union is an international non-governmental organization, constituted since 1948. It is a Union of sovereign States, governmental entities, and non-governmental organizations. Its primary interest is to encourage scientifically founded action which establishes links between the environment and development, with the aim to promote improvement in the world populations' quality of life. There is a commitment to try to assure that the human utilization of natural resources occurs in an appropriate, sustainable and equitable manner.

The World Conservation Union has a Regional Office for Mesoamerica, with headquarters in San José, Costa Rica. Its purpose is to provide services that are required by its members in Mexico, Central America and Belize.

Wildlife is one of its programs. It is founded on the premise that the controlled use of wildlife is an alternative to the strict protection of the resource. By effectuating a sustainable use of the wild resource, biodiversity is preserved, as the ultimate aim, which is vital for its development and that of future generations.

The Wildlife Program for Central America, came to being at the adoption of Resolution 18:24 in the 18th is sustained on the principles and criteria of "Caring for the Earth" (A Strategy for Sustainable Living); whose basis is the establishment of an ethic for the care for nature and people, and sets up actions that are reinforced by acquiring an individual, local national and international character.

The program of the Regional Office for Mesoamerica, parallel to the Strategy for Caring for the Earth, tries:

- To respect and care for the community of life, by proposing actions that directly benefit the conservation of wildlife and the habitat that sustains it at the long-term.

- To improve the quality of human life. This work is based on a triangle where the user's role is of equal importance to that of the wild populations' or the habitat. Here, any action should be based on a serious analysis of the social and economic situation of the human communities.
- To enable communities to care for their own environment, by promoting and facilitating the management of species which are of interest to the rural communities, as well as securing a just profit for the traditional users from the resources' exploitation .

The Wildlife Program for Central America, has achieved actions:

- To promote the sustainable use of wildlife resources for the improvement of the quality of life of the rural population in the Central American region.
- To assist the Central American governments and non-governmental groups in their wildlife resource management programs with technical, administrative, legal and inter-governmental cooperation aspects.
- The implementation of demonstration projects for the sustainable use of natural resources in Central America.

Community wildlife demonstration projects have been developed in:

- Guatemala: community management of fauna species in *Uxactún*, within the Mayan Biosphere Reserve, in Petén.
- Nicaragua: community management of garrobo in semi-captivity.
- El Salvador: community wildlife management project in La Laguna de Jocotal.
- Costa Rica: community management of alligator in the Caño Negro Wildlife Reserve.
- Panama: management of paca and green iguana.

These demonstration projects are carried out through governmental and non-governmental organizations in each of the countries. As well, the program has proposed the establishment of a network of technicians who work in the region. It will be formed by those professionals interested in wildlife management, and will permit a better transfer of information and technology in the aspects related to this subject.

The activities of the Wildlife Program for Central America are developed according to the following conceptual framework:

- That biodiversity is a vital resource, indispensable for survival, important for the economic, social, cultural, esthetic use which should be conserved for the benefit of present and future generations, in all of the Central American territory, within as well as outside of the protected areas.
- That wildlife is a shared resource, which doesn't admit geographic or administrative divisions and that requires, in many cases, measures for protection and regional controls for its adequate conservation at the long range.
- That rural communities depend and have depended on wild resources throughout the years for their well being and development. That the sustainable use of biodiversity improves the quality of life of human communities.

- That the traditional knowledge of native communities regarding the use and exploitation of wildlife resources is very valuable.
- That women have knowledge and fundamental experience in the use and exploitation of wildlife resources, as well as in the education for its sustainability.
- That the State should regulate the distribution and the equitable access to the resources, balancing between the inclination for profit at the short term and social interests at the middle and long range.
- That the law is an instrument that can promote community participation in wildlife management, and that the norms that regulate the sustainable use of natural resources should be based on scientific and traditional knowledge.

### 3.2 The wildlife program for Central America: the juridical and institutional emphasis

Since 1993, the Wildlife Program of the Regional Office for Central America of the World Conservation Union has developed actions on environmental legislation matters, specifically regarding wildlife.

One of the objectives of the Wildlife Program is "to contribute to the development of basic elements for the elaboration of a strategy in environmental legislation that permits community participation in wildlife management, through effective and efficient instruments".

The Program's juridical and institutional aspects have elaborated a plan of activities which include:

#### 3.2.1 A diagnosis, in each country of Central America, of the situation concerning legislation and institutional structures, for wildlife conservation matters

Its analysis was focused on the possibilities for community participation in its management. This research project had a duration of 2 years and involved natural science and law professionals, with the aim to obtain an interdisciplinary focus. At the end of 1994 a book entitled "A necessary encounter: the management of wildlife and its juridical regulations. A Central American diagnosis" ("Un encuentro necesario: el manejo de la vida silvestre y sus regulaciones jurídicas. Un diagnóstico centroamericano"), was edited by M.Sc. Vivienne Solís and Lic. Patricia Madrigal.

The general objective of publishing this book was to motivate an awareness of the need for each country's political authorities to tend to administrative aspects and wildlife management more rigorously, while also providing systematic information which is of interest to different organizations and academic and research institutions.

#### 3.2.2 Legislative assistance in the elaboration of wildlife conservation laws

According to the above mentioned diagnosis the regulation of wildlife in the broad sense is one of the gaps at the Central American level. Therefore, at the request of the corresponding legislative bodies, Costa Rica and Panama have been assisted in the elaboration of Law Projects on this matter, which are now in effect, and a process has been initiated in Nicaragua.

### 3.2.3 Research and diffusion

Interdisciplinary work and "demonstration projects", as spaces for observation and learning, have permitted the systematization and analysis of the main conclusions for the consolidation of a juridical outline.

This enrichment offers the possibility of providing juridical assistance with knowledge of the reality and an adequate evaluation of the socio-economic circumstances.

In the search for ways to reach the proposed objective of promoting the sustainable use of wildlife resources to improve the quality of life of the rural population in Central America, demonstration projects have been established in various countries of the Region.

#### 3.2.3.1 The sustainable use project in La Laguna de Jocotal

The Project is developed in La Laguna de Jocotal which is located in the southeastern zone of El Salvador. This lagoon has a great variety of wildlife including aquatic plants and resident fauna, especially birds, some migratory and in danger of extinction. Its size changes according to the dry and rainy seasons that causes legal problems regarding its boundaries.

The Project is implemented by different organizations that promote community organization and education for the sustainable use of their natural resources. Nesting cages have been installed for patos arbóreos or "piches", harvesting their eggs for consumption and exchange.

#### 3.2.3.2 Community management of the black garrobo (*ctenosarura similis*) and the green iguana (*iguana iguana*) project in Cosigüina

This Project is located in the Cosigüina Peninsula, in the northeastern zone of Nicaragua. The Cosigüina Volcano is found in the Peninsula, which was declared a Wildlife Refuge in 1956 and as a Natural Reserve in 1983. The activities of the Project are carried out in the buffer area.

Its objective is to promote community participation in the sustainable use of wildlife, with emphasis on the reproduction of the iguana and *garrobo*. This is accomplished by developing new productive options and a diversification of economic activities to improve the quality of life and the sustainability of the Project.

#### 3.2.3.3 Community management of wild fauna resources project in Uaxactún

The Project is developed in the community of Uaxactún, located in the heart of the Mayan Jungle, in Flores of the Petén Department, Guatemala.

Its objective is to develop community management plans for the sustainable exploitation of the fauna species which are used by the community for consumption. These plans will incorporate traditional knowledge and be supported by scientific and social research.

#### 3.2.3.4 Institutional strengthening for the control and conservation of wildlife resources project in Panama

Its objective is to increase the capacity of the Institute for Renewable Natural Resources (Instituto de Recursos Naturales Renovables) so it can provide extension services to rural communities, for wildlife management, in the Cañas Island with marine turtles and in Cabuya with the green iguana.

These projects have motivated the following reflections around real situation.

During the first trimester of 1995 an exchange was held between the technicians of each one of the projects, to visit and learn about the experiences developed by the others. The following reflections are the product of this systematization process. From the local experience, great inputs are extracted for a global analysis, trying to transcend the problems for local development to the obstacles that are found at the national level.

3.2.3.4.1 Strengthening the rules of law and the expansion of democracy, indispensable requisites of environmental legislation. The teachings of the "La Laguna del Jocotal" project.

"The campesinos don't have property titles. This is the reason that they don't invest".

Land tenancy is one of the conditions required to undertake conservation actions. See for example, the situation in El Salvador, in relation to the absence of an up-to-date and reliable Registry System, that guarantees the juridical security of the land.

In order for grassroots groups to approach a conservation strategy, there are relevant juridical aspects to be defined. The most important without a doubt is the definition of land ownership. This factor causes serious obstacles in our countries where Democratic Systems are barely in a process of establishment, since the governments have been elected "democratically" only five years ago.

Great differences exist between the catastral and registered information. The case of La Laguna de Jocotal, from the strictly juridical point of view, doesn't offer major problems. Based simply on the Legislation which is currently in effect, a lagoon is of public domain, and therefore is inalienable and inadvisable; it can't be inscribed by any one person, and in the case that it has been doesn't grant him/her any acquired rights.

Nevertheless, reality is totally different. La Laguna del Jocotal has been inscribed by its adjacent landowners. According to the Property Registry, the lagoon doesn't exist, it is an "optical illusion". Even though judicially it can not have generated any right, if a protected area were to be established, the supposed owners would have to be indemnified.

Groups that have greater access to the inscription of properties have economic, political power and strongly defend their interests. For this reason, it is not of interest to look for alternative ways for granting property titles to the persons who live in the villages that border the natural areas. Due to the lack of property titles in these extremely rich areas, pressure groups have tremendous interest to inscribe them as their own, despite the fact that the villagers are the real owners.

To develop a Conservation Policy, the State as an organization of society, definitely should exercise a Rule of Law and having advanced democratic society place more attention to these structural requisites:

- Free electoral systems.
- Representativity of public positions.
- Anticipation of civil society.
- Administration of autonomous and independent justice.
- Reliable property registry systems.

The strengthening of the Rule of Law implies the struggle against corruption; this is extremely important for the control of one of the causes of irrational exploitation of natural resources.

3.2.3.4.2 “No one can be obligated to do the impossible”. With hunger there can not be conservation. The teachings of the “Cosigüina” Project.

Carlitos is a nine year old. While visiting the Project in Cosigüina he asked us to take him to Chinandega. A Military Police check point was searching the vehicles this day. In his knapsack Carlitos carried a *garrobo* (black iguana) and three baby parakeets, still without feathers. Seeing our surprise, he calmly told us after they had taken away the animals from him and we had started on our way again: “Thankfully they didn’t find the biggest iguana that I have with me which is pregnant”.

Trying to contain all of the mixed emotions that this event produced in us, we understood that in the Chinandega market the equivalent of US \$ 0.70 was paid for these iguanas and US \$ 0.10 for the parakeets. The day before Carlitos had also gotten three parakeets. Each day he had to climb higher up the mountain of the Cosigüina Volcano, to reach the parakeets’ nests.

When we affirm that the communities live from the resources that are found in the woods, many times we are saying that they “survive” thanks to these resources. The animal protein in their diet comes from these resources; they use the leather; extract seeds, mushrooms, wood, water...

Unfortunately the use of the woods at this rhythm doesn’t permit the recuperation of the ecosystem. In all the Demonstration Projects that we visited it is recognized that “day by day it is harder” to obtain the resources. It is extremely difficult to break the circle of misery and allow for the rational management of the natural resources. For these communities, even an income of US \$ 4.00 is a benefit to its quality of life.

Therefore, it is imperative that Demonstration Projects enable the observer to transcend each country’s structural reality and analysis of economic and social policies. It is here where a feeling of frustration and impotence stems from.

The Law as regulator of social harmony, is a product and forms part of this political and social structure, one of the consequences being the despairing poverty of our countries.

Its response has been slow. Only sanctions have been included as application instruments in the laws that are intended to conserve the fauna. Not only pecuniary sanctions, like fines, which surpass the majority of rural families’ incomes by various months to a year, but with penalties that restrict freedom, in other words, jail. Without even mentioning the problems that are encountered in the Administration of Justice in each country, sanctions have been established that are due to the non-application of the laws.

This repressive juridical system has to change, it must be modified, and converted into a preventive juridical system, which procures environmental conservation objectives, providing opportunities for its management.

3.2.3.4.3 For broad participation in the elaboration of juridical instruments. The teachings of the “Uaxactún” project.

For some years, the National Council for Protected Areas (Consejo Nacional de Areas Protegidas) has been preparing a Hunting Seasons Calendar. The elaboration of this wildlife conservation instrument has taken five years, and still has not been approved, since the Bylaws of the Law of Protected Areas establishes the need for it to be approved by the Congress of the Republic.

It is definitely inadequate to demand the approval of a technical conservation instrument, which in addition should be reviewed and modified periodically, by a deliberative political body such as the Congress of the Republic.<sup>12</sup>

This is precisely the reason that the Hunting Seasons Calendar Project has not yet been put into effect. The existing norms regarding the continental wildlife resource are found mainly in the Law of Protected Areas and its bylaws. A General Hunting Law of 1970 also exists, which has practically fallen into disuse.

For the inhabitants of Uaxactún, where the Demonstration Project is being developed, hunting has a high economic and social value; it is essential to sustain their daily diet. So, it is not just a casual interest that brought them to discuss this Hunting Seasons Calendar Project.

The Demonstration Project in Uaxactún originated in the discussion of this juridical instrument project with the inhabitants of this community, and is a real example which demonstrates the importance of holding discussions with those groups that will be the most affected by the approval of a juridical norm. This is important for the enrichment of the process of elaboration of the norms, which without a doubt will lead to a better application of them and fulfill the established objectives.

The technicians who work in this Project began a process for diffusion and discussion with the community's inhabitants, which has a broad hunting seasons tradition. The following are the main aspects that came out of this process:

Both the Consejo Nacional de Areas Protegidas Law, which was just approved, and the first draft of the Hunting Seasons Calendar Project, evidenced a great contradiction between the prohibition of many activities and the reality of a rural community which is accustomed to an intense and diverse use of the woods.

Originally they had been conceived more for sports hunting than for subsistence hunting; they hadn't sufficiently evaluated the importance that hunting has as a source of animal protein in this country's family diet.

The Mayan Biosphere Reserve (Reserva de la Biósfera Maya), an extremely rich extension, still has a woods with a broad surface area which is expansive enough to sustain large, healthy and stable seasonal animal populations.

Some conclusions have been drawn from this Consultation Process with the local hunters, who with great pragmatism and common sense gave their opinions on the Hunting Seasons Calendar Project. As follows are some examples of the opinions that have been expressed:

With regard to hunting licenses which could be granted per family, the Project limited the license's use to three family members, but in this community the families are large, with an average number of 5 persons.

It outlined specific days for hunting; sports hunting from Thursday to Sunday and subsistence hunting from Monday through Thursday. This was qualified as being absurd; the days of the week are not the factor that defines when a person is going to go hunt. This is a point where traditional practices that have been developed by these communities for thousands of years should be taken into account and be respected.

It makes it obligatory to carry a booklet with the species hunted, which should be handed over to the Municipality every year. Hunting quotas for the next year will then be defined using this information. Without a doubt this point will provide a good quantity of very valuable up-to-date information. With regard to this aspect, the Community also manifested their wish to have this information.

The only hunting techniques established included fire-arms and bows and arrows. As well, the use of other hunting techniques which are used locally such as snares, slingshots, lures for mammals, bait, dogs, tiger traps (tigreras) is prohibited; the calibers of fire-arms which are included are unknown to the inhabitants and do not correspond to those fire-arms that they possess. The prohibition should be restricted to poisons, toxic substances or artificial light (flashlights, lanterns, etc.).

It establishes that the hunters who hunt for domestic consumption should not hunt more than that which will be used to feed their own families, but in *Uaxactún* the inhabitants eat half of what they hunt and sell or exchange the other half within the community for other goods. There is no profit in this exchange or sale; the community doesn't want the price of meat to go up.

With regard to "sports hunting", the community prefers that it not be allowed in the surrounding areas, or at least that limits be established. For example, that a local guide be used or that a hunting fee be paid.

In spite of the fact that the intention is to elaborate a prevention law, for conservation of the fauna, it includes few control instruments, and these are limited to vigilance by the Municipality and the community, but they do not give them defined attributes. The orientation of the laws which are in effect in the Central American region continues to establish sanctions of fines on these aspects. These fines are set at five hundred quetzals which presently is equivalent to some 75 to 80 US dollars; this is the annual income of a family in *Uaxactún*.

The Consultation Process which was carried out is an example that should be followed in the elaboration of juridical instruments which will have an impact on the rural communities.

#### 3.2.3.4.4 Institutional commitment in the elaboration of regulations. The case of Panama.

The legislative initiative is shared by the Deputies, as members of the Legislative Power, and by the Executive Power. Approval of the laws is an exclusive capacity of the Legislative Power. Nonetheless, in reality the Executive Power normally exercises the legislative initiative, submitting for approval the Law Projects of its interest, and directly influencing on the establishment of the Legislative Agenda.

In Panama the Environmental Commission of the Legislative Assembly has taken up this function by seeking advice needed to elaborate a General Wildlife Law Project, looking for support for the process from the Executive Power. This example constitutes a revindication of the Legislative Power in its function to elaborate the legal legislative framework.

The Wildlife Program and in the Environmental Legislation Center, of the World Conservation Union responded to the request for support for the elaboration of this Law Project.

The former, providing technical assistance through the Regional Office and the Committee of Panamanian Wildlife Specialists, professionals, scientists, from governmental and non-governmental bodies, met for eight months to discuss what should be included in a norm related to this subject in their country.

The Environmental Legislation Center contributed juridical assistance through a regional advisor and a national advisor, who participated in this process by collecting the recommendations made by the Group of Specialists and reflecting on the most suitable juridical instruments.

An important part of this process was the consultation made in the governmental institutions directly related to this subject and in the non-governmental conservation organizations and users of this resource, whose purpose was to collect their recommendations and opinions. This consultation workshop was not an expository event to gather the participants' endorsement, but rather was an activity of intense work; for 3 days, 45 people dedicated an average of 8 hours daily, to substantially modify and enrich the foundation document that had been presented to them.

The Environmental Commission of the Legislative Assembly and the Department of Protected Areas and Wildlife of the Institute for Renewable Resources (Instituto de Recursos Renovables) maintained close contact during the entire Process, supporting and recognizing the work being carried out. The notable participation of the Supreme Court of Justice and the

Office of the Environmental Ombudsman should be emphasized, due to the importance they should play in the elaboration of the juridical instruments and the care taken in the aspects of Justice Administration.

This process, where coordination among the Powers of the Republic, institutions, and between the State and civil society converged, while maintaining a balance between scientific and juridical aspects, is an example that brings us closer to a correct elaboration of the law.

## 4 CONCLUSIONS

There are two levels of final reflections, first in global terms for Environmental Law and the State; and second, in specific terms for regulations concerning wildlife matters.

### 4.1 Global reflections on environmental law and the state

According to the activities developed during the past two years, four main conclusions can be made which are obstacles to the actions needed to overcome the weak enforcement and low compliance of the Environmental Law:

- The absence of structural conditions which assure a Rule of Law.
- The growing poverty in the region.
- The scarce participation in the elaboration of juridical instruments.
- The weakening of the State.

Little by little, Central America should overcome the difficult period of social confrontation that it has been affected by, achieving a social concentration that permits the strengthening of the Rule of Law, that satisfies the basic needs of the people.

The Rule of Law doesn't just come to be "per se", it must be constructed. In our Region institutional forms that diminish poverty should be found.

We have witnessed a reform of the State, in each and every one of the countries of the area; a large number of public officials have mobilized trying to reduce non-essential services and be more efficient. This process has weakened the State as we have known it up to now. Although it is true that the figure of the assistentialist State is not sustainable, public obligations which permit a country's development cannot go unfulfilled.

One of these public obligations, undeniable and non-transferable, is the conservation of natural resources and of the environment. The contrary would be to mortgage the options for development. If the state's present orientation recommends the decrease of activities where the State is executor, its function as comptroller, as auditor, should be strengthened.

Two fundamental events should occur:

- A way to reduce poverty is the promotion of the sustainable use of natural resources. The rural communities should be capable of using their natural resources, in accordance with their cultural and millenary traditions, accompanied with scientific assistance, permitting the resources' sustainability.
- A greater participation in the establishment of norms that regulate this sustainable use, guaranteeing the best enforcement and compliance.

- 4.2 The elaboration of norms should first take into account the socio-economic-cultural conditions of where they will be enforced:

This conclusion has led us to think that Environmental law should stem from two sources. Traditional knowledge which collects the habits, knowledge and traditions that historically have regulated the relationship between the native communities and the use of natural resources.

Traditional knowledge coming from the autochthonous groups, should be recovered and analyzed, to discover principles for environmental management. These millenary traditions, experienced by native groups, should enrich the present reality. The past is a source for analysis of the present.

- 4.3 Scientific-technical knowledge

Scientific-technical knowledge helps when providing explanations or solutions to the historical environmental problems and can offer current development instruments.

Environmental Law is converted into a catalyst from these sources, where the different sectors of society interact according to their interests, to find new forms of harmony. In this sense, the State has a fundamental role to try to balance these interests for the common good.

- 4.4 Specific reflections for legislation on wildlife

Based on the legislative assistance which has been provided over the last years to regulate the wildlife resource, these should procure that:

- 4.4.1 The object of a wildlife law should encompass a broad concept of this resource

Wildlife legislation, during the first half of the century, has been fundamentally oriented towards the regulation of hunting. For this reason, its objective has mainly been fauna, leaving aside other components of this resource, such as flora, fungus, microorganisms, alga, etc.

Presently wildlife legislation encompasses a concept which is much broader than just vertebrate animals, and includes all the kingdoms that Science, in its development has identified and classified (see figure 1).

Wildlife is defined as a union of living organisms including the monera, protista, fungi, animalia and plantae kingdoms; these live in natural conditions in the national territory and do not require care by human beings for their survival or else live, temporarily or permanently, in non-natural conditions.

- 4.4.2 The sustainable use of wildlife should be promoted, above all by rural communities

To achieve wildlife conservation different systems have been used, like resource conservation in the place where these are found; for example, "conservation in situ" through the establishment of protected areas. It has also been accomplished by "conservation ex situ", which is to say the conservation of wildlife resources outside of the areas where they are found in a natural manner, for example in zoos, botanical gardens, etc.

The term conservation is used in a broad sense, accepting wildlife management activities. For example, a rational use of this resource can be achieved through farming and ranching of wild animals. The reproduction of wild animals can have commercial ends, which is characterized by their objective to make a profit, but it also can be undertaken by the communities.

The participation of the communities in wild animals ranching and farming allows for the improvement of their alimentary diet, by including more protein content; it achieves the conservation of forest coverage and thus, of water nascents; and can provide additional income stemming from the exploitation of woods products and wild animals.

#### 4.4.3 The law should be enforced by the authorities and should be complied by everyone

At this time, the greatest challenge to the Law is the enforcement of the juridical regulations and their forms of control.

When the difference is established between formal "reality" which is set up in the juridical texts and the objective "reality" that we see day to day, we become aware of the divorce between both. Today, this is the subject of major reflection by jurists and by all the society in general.

The real possibilities for enforcement and compliance of the reglamentation that is sought to be established, should be questioned. This question should be present from the very moment of the regulations' elaboration, because it affects each one of the matters that are posed.

The communities should participate and understand the existing regulations and their importance for the conservation of local resources. A growing interest exists to recover "traditional knowledge" which is the key to the rational use of natural resources by a portion of autochthonous groups. The recognition of its importance should not solely be academic, but should influence on the elaboration of policies and regulations, in a manner that permits the inclusion of ethnic considerations and the enrichment of the juridical and institutional system with other types of instruments.

#### 4.4.4 Control instruments for application of the law should be preventive and exceptionally repressive

The penalization of the conduct that attack wildlife conservation has been used as a control instrument in the norms that regulate this resource.

Practice has demonstrated that aggressions against wildlife resource still are not penalized, which is needed for them to be converted into penal crimes, and sanctioned with prison terms.

Judicial authorities do not see this as important, comparing them with other aggressions like those against property, such as theft or robbery, or against human life, in the case of lesions or homicides. Due to the volume of legal proceedings that are managed in a judicial office, it is difficult for these denouncements to be resolved, and even harder to obtain an exemplary sanction.

The classification of conduct should be directed towards really grave conduct, like the trafficking of species.

The use of penal law is the "last step", an instrument that should be used as the last consequence in an environmental policy. The legal proceedings of the State should be oriented somewhat according to the Precautionary Principle, which is included in the Rio de Janeiro Declaration, which demands that actions be taken even though no scientific certainty regarding the causes of a determined problem exist.

#### 4.4.5 Implications of wildlife legislation on biodiversity

Wildlife is an important part of biodiversity. At this time, the pressure exercised on biodiversity, occurs in the wild part. A type of legislation is required that sees to the conservation of this resource in an integral manner, but most of all one which answers the need to establish controls that permit its enforcement and compliance.

At this time some regulations on wildlife exist, on hunting aspects, but there is a total absence on biodiversity. The establishment of controls and regulations should be gradual, according to the institutional capacities of each country, but with a vision of sustainable use of the resources in benefit of their quality of life.

Recently, at the request of the Commission for Environment and Development of the National Assembly of Nicaragua, we have initiated a diagnosis on the juridical and administrative situation of this country's biodiversity.

The goal that we have established is the preparation of a law project that will fill the existing legal gaps, procuring effective (enforcement) and efficient (compliance) instruments.

Nonetheless, this legal initiative should be placed within a conceptual framework which procures that the management, control and distribution of the resources, as well as the benefits derived from the use of the biodiversity, are carried out with:

- Community participation.
- Respect for traditional knowledge.
- Equity (between men and women).
- An evaluation of the impact of the economical policies on conservation.

Nicaragua has a national strategy on biodiversity. Its objective is to search for alternatives for a juridical strategy that consolidate a juridical legal framework according to these purposes.

The following has been defined as the work structure:

There has been a great discussion over the concept of biodiversity which will be used. For now, it has been defined with an emphasis on wildlife, continental and marine resources; the resources which will be considered wild resources are those previous to human manipulation, whose aim is domestication.

Regarding biological and biotechnological resources, there is a discussion about what is the order of domain: who does this resource belong to? What the concept of property implies as far as domain, use and benefit are concerned.

- The regime of intellectual property.
- The access to genetic resources.
- The evaluation of environmental impact for the control of exotic species.
- Research and technological transfer.

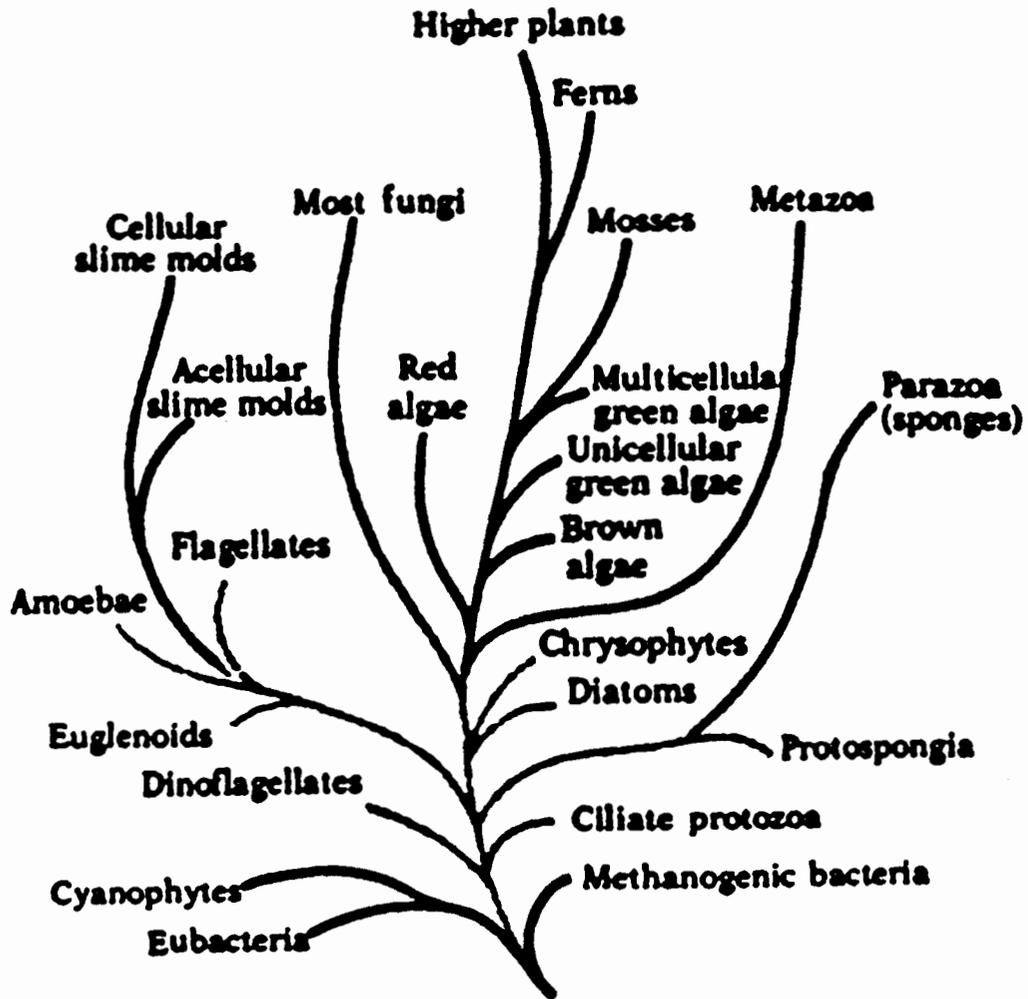
**As far as conservation in situ:**

- Protected Areas: The efforts to grant the administration of protected areas to local organizations such as municipalities or autonomous regions; or the systems of associated property, which grants the property to men and women, in buffer areas.
- Lists of threatened species.
- Traffic.
- Research (the departure of endemic species from the country, forms of control).

**Conservation ex situ:**

- Zoos, botanical gardens, seasonal farms, animal farms/ranches, germoplasm banks.
- Reintroduction of wild species: recovery centers.

Figure 1



**(e) WHITTAKER'S FIVE-KINGDOM SCHEME**

Robert A. Wallage, Jack L. King, Gerald P. Sanders  
"BIOLOGY, THE SCIENCE OF LIFE"  
Editorial; Scott, Foreman and Company. 1981.  
p.403.

### **Incentives**

In each one of these subjects the following items will be analyzed:

- International norms.
- Background regulations.
- Administrative procedures.
- Institutional capacity.
- Enforcement-compliance analysis.

This process for the elaboration of a wildlife law, which develops the orientations established by the Biological Diversity Convention, has been designed using a broadly participative methodology, mostly because this country is the most advanced as far as social organization.

Finally, in this era of demystification, the Law should surpass some premises, such as:

- "No one can plead to be unknowledgeable of the law." If permanent diffusion programs, training and the discussion of juridical norms do not exist, this aphorism doesn't apply to reality. The reality is that the majority of the citizens are ignorant of the laws.
- "Norms should be general, enforceable for all." In a region of great cultural wealth, diverse ethnic and autochthonous groups, immigrants, some differences should be recognized. In order to respect cultural dignity, principles for interpretation should be included in the law which recognize these differences.

There is an estrangement between the moral and legal content in the Law, there is a lack of ethic, revalidating forms of authoritarian organization and materialist attitudes. This is the origin of the frustration and social discontent in which we live. A movement for the humanization of the Law, which questions why, for what and for whom the juridical systems are necessary.

In my opinion, the Law is justified as a regulator of social harmony, for the well-being of the citizens, in benefit for all, but mostly is for those who are the most deprived.

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## INTERNATIONAL COOPERATION: INTERPOL

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### SUMMARY

Since 1985 environmental crime has increased considerably. One of the causes of this increase is the forever growing mountain of waste in Europe, which itself is partly due to the fact that in Europe too much waste is produced and that the development of possibilities for processing this waste does not keep pace.

Added to this are the more stringent requirements set by the authorities for waste processing and the increasing costs; in the Netherlands, for instance, these costs have tripled over the past few years.

Criminal inquiries conducted in the Netherlands have shown that the waste problem is a breeding ground for environmental crimes.

### 1 INTERNATIONAL ENVIRONMENTAL CRIME

International environmental crime takes several forms:

- The so-called waste tourism, which involves illegal cross-border transports of waste within Europe. The routes used by the international criminal organizations in question are usually part of large-scale environmental crime operations.
- The illegal dumping of waste at random spots in Europe. Investigations in the Netherlands show that Dutch waste is being transported to dumps in Belgium, France, England, former Yugoslavia, the former Soviet Union, Poland, and Romania.

To the offenders and criminals, who operate at an international level, it is a very profitable business to gather waste in one country and dump it, sometimes under false pretences, in another country illegally. One of the major obstacles the authorities meet with in their fight against these illegal activities is that the international exchange of information is no easy matter; this is due to the differences in legislation and approach to this particular form of crime. The chance that perpetrators involved in illegal dumpings are caught is small; their financial gain, however, is very often considerable.

We can easily conclude that international environmental crime is a very profitable business; at the same time we cannot but acknowledge that fact but see that the fight against this particular form of crime poses a great many problems. Illegal activities committed in different countries attract less attention than those committed in a limited area, consequently, the chances that perpetrators are caught are not as high either. This means that those involved in professional

environmental crime are continuously roaming Europe in their search for new places where they can illegally dump waste. All European countries will sooner or later be confronted with this form of crime, with serious social and economic consequences.

Obviously, the fight against international environmental crime necessitates a coordination of the efforts undertaken by the various law enforcement authorities.

## **2 CURRENT SITUATION**

In the current situation authorities in different countries cooperate only on an ad hoc basis and on the basis of treaties on international legal assistance. This may suffice for simple crimes, but when internationally operating professional criminals are involved the case is quite different. Experience has taught us that the gathering of relevant information is particularly difficult because:

- In a great many cases information must be obtained from different sources.
- There is usually no central contact point.
- The definition of "environmental crime" is not the same in all countries.
- Almost always professional criminals make sure their illegal activities are hidden by a legal front.

Beside the information provided by judicial authorities, information from local governments and agencies is especially relevant to the fight against environmental crime, both at the national and the international levels.

For example, it should always be examined whether dispensation or certain licenses have been issued to a suspect. In almost every European country there is a government body which is to see to it that the rules and regulations regarding the protection of the environment are complied with. Still, the exchange of information is problematic because the various legal systems are all very complex, because there is a lack of knowledge regarding these systems, and because there are no central contact points.

## **3 IDEAL SITUATION**

As explained above, the internationalization of environmental crime will continue in the future, because, as the waste issue is still increasing, the market for illegal practices is still growing. These developments will make it even more necessary for the European countries to cooperate and gear their activities where the fight against international environmental crime is concerned. It seems desirable that this occurs at two levels:

- First, it is important to coordinate the gathering of information regarding the various law enforcement activities and of the information to perform these activities efficiently.
- Second, it is also important to coordinate the gathering of information on regulatory bodies and of the information they can provide. As indicated above, almost every European country has a body that sees to it that rules

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and regulations regarding the environment are complied with. Linking the information provided by these bodies at an international level is essential in the fight of international environmental crime.

All this leads to the conclusion that an international platform is what is needed for the coordination of the various activities regarding the fight against environmental crime. Such a platform will provide an opportunity to exchange information, to perform crime analyses, and to make a start with international, well coordinated, concrete criminal inquiries.

#### **4 CONCRETE MEASURES**

INTERPOL has discussed the subject of environmental crime. Up to now these discussions have led to:

- An insight regarding a world and a European network of national police contact points, where environmental law is enforced at a national level.
- The compiling of a so-called ECO report, which is a standard form for the (bilateral) exchange of information on environmental crimes, needed in order to provide a reliable structure for the provision of information at world and European levels. As the document, which is available in three languages, has been drawn up with the help of the relevant contact points, all countries know what the ECO report is and how it can help the exchange of information. It has been agreed that ICPO INTERPOL in Lyons will collect and process information at world level, and that Denmark will do the same at for Europe.
- The organizing of a seminar (training module) for representatives of the police forces in the various countries.

#### **5 CONCLUSIONS**

Building a network, and getting to know it thoroughly, establishing which kind of information is exchanged with whom, and providing others with one's know-how and experience are the first three steps which have now been taken.

The next step should now be a more goal-oriented and well coordinated international cooperation and image building. INTERPOL is considering paying particular attention to the following phenomena:

- Waste tourism and dumping of waste.
- Illegal trafficking of nuclear substances.
- Illegal trafficking of protected species (animals and plants).
- Illegal waste brokers.

Added to this is the attention that should be paid to cooperation among national agencies and the consultation of governmental bodies required at an international level.



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## **TRANSFRONTIER SHIPMENTS OF WASTE: SUCCESSES AND PROBLEMS WITH THE ENFORCEMENT OF SUPRANATIONAL LEGISLATION**

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### **SUMMARY**

This article provides an overview of successes and problems in enforcing European Regulation No. 259/93 on the supervision and control of shipments of waste within, into and out of the European Community (EC).

## **1 INTRODUCTION**

### **1.1 Background**

The problems caused by dioxin-containing waste following an explosion at a factory in Seveso in Italy in 1984, led the European Community to draw up Directives designed to control the processing and transfrontier shipment of hazardous waste. The transfrontier aspect was also dealt with in the Basel Convention and within the Waste Management Policy Group of the Organization for Economic Cooperation and Development (OECD).

The results were incorporated into EC Directive 84/631 on the transfrontier shipments of hazardous waste, which has now been implemented by the European Member States.

Several European countries had to contend with waste between 1988 and 1989, searching the world over for somewhere to dispose of it. It became clear that there was a lack of communication between enforcement organizations within the European Union (EU).

The Inspectorate for the Environment therefore took the initiative in 1992 to organize a European enforcement project. The aim was to build a network of enforcement organizations involved with monitoring compliance with and enforcement of legislation governing transfrontier shipments of waste.

The project, entitled "Transfrontier Shipments of Hazardous Waste (TFS-1), was carried out by monitoring transfrontier shipments of paint waste and spent solvents between five participating countries (Belgium, Germany, Luxembourg, the United Kingdom and the Netherlands). The project was completed in May 1994 and a follow-up and continuation of joint enforcement activities was recommended.

### **1.2 European legislation**

European Community Directive 84/631 concerning the transfrontier shipments of "hazardous waste" was replaced on May 6th 1994 by European Regulation No. 259/93. The official title is "Council Regulation (EEC) No. 259/93 on the supervision and control of shipments

of waste within, into and out of the European Community." One major difference between EC Directive 84/631 and European Regulation No. 259/93 is that the latter regulates wastes of all types, not just hazardous wastes.

## **2 "TRANSFRONTIER SHIPMENTS OF WASTE" (TFS-2) ENFORCEMENT PROJECT**

### **2.1 Grounds for the project**

The final report on TFS-1 recommended a follow-up, with the following aim in mind:

*"To develop a permanent structure (not as a project limited in time) to allow existing cooperation and coordination to continue and expand to other countries."*

The first step towards this structure was to design a new enforcement project entitled "Transfrontier Shipments of Waste in Europe (TFS-2)."

The essence of "TFS-2" is, in conjunction with a number of European Member States, to monitor proper compliance with European Regulation No. 259/93 with a view to improving compliance and enforcement and to continue to develop the enforcement network at operational level.

### **2.2 Outline of the project**

The project is being conducted under the auspices of the IMPEL (Implementation and enforcement of environmental law) network. This network was set up in November 1992 to provide a mechanism for the exchange of information and experience between environmental enforcement bodies within the European Union. Its objective is to raise professional standards within national inspectorates and to enhance the quality of pollution control enforcement throughout the Union.

TFS-2 has been adopted by the IMPEL network as "Ad hoc working group IIIa."

The project is structured as follows:

- Orientation:  
Contacting organizations that are interested in participating.
- Desk-research:  
Conducting a survey of information on the waste flows being investigated (PCBs/PCTs), some non-ferrous metal wastes and etchants). The purpose of this phase was to form some picture of the waste flows selected on the basis of the documentation and data files available.
- Company visit and shipment inspection plans:  
Visiting companies (including those acting as producers, disposers, treaters and brokers of transfrontier shipments of waste), primarily to acquire the information required to form an overall picture of the waste flows selected.
- Final report:  
Compiling the final report with conclusions and recommendations on how to improve enforcement of European Regulation No. 259/93.

## 2.3 Results

Enforcement organizations from 13 European Member States are currently involved. Although not an EU member, Norway is also participating as an observer.

Thanks to the joint enforcement activities, a number of European companies involved in waste production or disposal are now familiar with their compliance with European Regulation No. 259/93 being monitored.

The desk-study identified 1.370 waste flows. This overview lists the companies involved in transfrontier waste shipments, describes the waste and provides some further details.

More than a hundred company inspection site visits are planned on the basis of the desk-study findings. Approximately 30% had been carried out by October 1995. Although some companies require further investigation, the general impression so far is that companies are complying with the Regulation.

Additionally, 25 shipment inspections were carried out in seven European Member States in week 25 of 1995. More than 3,000 shipments have been checked. A number of infringements were identified, with various administrative errors on shipments with which the competent authorities were not familiar. A number of these shipments were sent back to the country of origin. Sound communication with enforcement organizations is a particular must in such cases - demonstrating the need for a good network.

Apart from these tangible results, there was a growing need for greater structure in the approach to enforcing the Regulation as enforcement was not uniform in the various Member States. The Regulation is also very complicated and requires Member States to cooperate in monitoring compliance. Although the Regulation is directly binding on all Member States and should therefore be clear, many problems of interpretation and definition remain.

## 3 FUTURE DEVELOPMENTS

### 3.1 Introduction

A task force was formed within the framework of ad hoc working group IIIa to develop a more structural approach to enforcement of the Regulation 259/93 in Europe. It concluded that a permanent forum would be effective by promoting joint enforcement. Ad hoc working group IIIa will put forward a proposal for a permanent forum under the responsibility of the IMPEL network.

### 3.2 Permanent forum

The objective is as follows:

*"The establishment of a permanent forum in order to coordinate, stimulate and support the enforcement of European Regulation No. 259/93 in Europe."*

The forum will help improve the clarity and quality of enforcement of the Regulation. The word "forum" has been chosen to highlight the fact that this is not just some new institution but a body concerned with the approach adopted to practical enforcement and finding solutions. The members are representatives of the European Member States involved in enforcing the Regulation.

### 3.3 Tasks of the permanent forum

The forum has seven tasks:

- providing the proper bodies (such as the IMPEL network and the European Commission) with problems encountered and recommendations/proposals for solutions concerning European Regulation No. 259/93;
- maintaining relations with other organizations (the European Commission, the police network and possible others) in order to exchange information on the enforcement of European Regulation No. 259/93;
- stimulating and facilitating European enforcement activities such as the current TFS-2 project (activities to be carried out by more than one Member State);
- developing a multi-year plan (working program) for enforcement activities;
- supporting the development of a central information and communication system;
- sharing experiences and information/solutions in respect of practical (interpretation) problems; and
- involving all Member States in the enforcement of European Regulation No. 259/93.

One of the forum's main tasks is to build upon the joint enforcement activities of several Member States.

It will therefore draw up a multi-year plan for the work. The plan will map out a vision of enforcement, along with goals and enforcement targets agreed by all Member States as well as specific enforcement projects and task forces.

One key element in the plan is to organize the swapping of information, knowledge and experiences. This exchange will provide a European understanding of monitoring compliance with the Regulation. The information thus gleaned will form the basis for a uniform enforcement strategy.

## **4 CONCLUSIONS**

### **4.1 Enforcement problems**

A number of problems were identified in enforcing EC Directive 84/631 and European Regulation No. 259/93 to date, breaking down into the following areas:

- definition;
- interpretation;
- practical enforcement; and
- communication.

For example: there were no procedures for returning illegal shipments and no guarantee of their arrival at the proper destination.

### **4.2 Successes**

Finding a solution to the problems mentioned requires effective communication and cooperation between enforcement organizations within the European Member States.

A network of enforcement organizations in Europe, the IMPEL network, was established in 1992.

Under the auspices of the network, two European enforcement projects were carried out. The outcome was a practical network of enforcement organizations responsible for enforcing European Regulation No. 259/93.

The number of enforcement organizations involved has grown from five in five European Member States to approximately twenty five in 13 Member States. The network will continue to expand into a solid, practical enforcement network involved in day-to-day enforcement of the Regulation. This will also enhance the uniformity of approach.

A proposal for a more structural approach as a permanent enforcement forum has been agreed by the organizations involved in the TFS-2 project and will be submitted to the IMPEL network for implementation.

In the meantime a start has been made on tackling the enforcement problems encountered, by discussing solutions and drawing up manuals. Agreements have also been reached on new joint enforcement projects on transfrontier shipments of waste in the near future.

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## **A EUROPEAN ENFORCEMENT PROJECT ON THE NOTIFICATION OF NEW SUBSTANCES (NONS); A COOPERATIVE PROJECT OF 14 EUROPEAN COUNTRIES**

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### **SUMMARY**

An impression on the set up and progress of the European inspection project on the notification of new substances (NONS) is given. Fourteen European countries have participated in this ongoing project and inspected approximately 100 companies. The preliminary results show some serious problems with enforcing this regulation. These problems will be reported to the European Commission and might lead to revision of European legislation. Besides this, the set up of this project has already proven to be very successful and can serve as a blueprint for other European inspection projects.

## **1 NOTIFICATION OF NEW SUBSTANCES, DIRECTIVE 67/548/EEG**

### **1.1 European legislation on new substances**

In Europe many chemical substances are produced and imported. These chemicals may expose man and the environment to unknown risks. To prevent the placing on the market of new substances without reliable information on the dangerous properties the European Union adopted in 1979 the Dangerous Substances Directive and improved this in 1992 (92/32/EEC)

By introducing a harmonized notification procedure since 1983 new chemical substances must be notified before placing on the market. The submitted information enables assessment by the various EU-member states of the dangerous properties of the chemical substance and is used to provide essential information for users in classification, labelling, packaging and safety data sheets.

### **1.2 Enforcement activities**

The success of the above described risk assessment relies not only on the chemical substances regulation implemented in the national legislation of the affected European countries, but also on the monitoring of compliance with this regulation. New chemical substances which have been placed on the market without proper notification lack adequate information. These substances could be on the market without proper classification, labelling and packaging, and without proper information in safety data sheets. These "no-notified" substances could present a serious danger to man and the environment, not only in one member state but potentially in all European Countries.

As most Member States were not yet actively enforcing this regulation, the EU started in 1991 a project to develop a guidance manual to assist enforcement authorities in starting up enforcement activities in this area. The manual was developed by a European working group. It is based on practical experience within Member States in the selection and preparation of inspections of companies that are manufacturing, selling, or importing new chemical substances. In October 1993, the manual was accepted by the Member States. A European inspection project seemed to be a useful continuation of the cooperation between member states on the enforcement of this regulation.

## **2 THE "NOTIFICATION OF NEW SUBSTANCES" (NONS) PROJECT**

The Dutch Main Department of Enforcement Environmental Legislation of the Inspectorate for the Environment took the initiative to coordinate an enforcement project on this area; The realization of this project takes place in cooperation with the EU-subgroup on Control Measures under the Chairmanship of the United Kingdom.

### **2.1 Aim of the project**

The main aim of the NONS-project is to foster a greater degree of compliance of companies with regard to the notification of new substances. A second aim is to monitor the occurrence of hazardous dyestuffs. This information can be useful for policy decisions. Moreover, the cooperation of the participating countries might be an example for other European enforcement projects.

### **2.2 Set up of the project**

A Dutch proposal for a European inspection project was put forward during a meeting of the competent authorities for the implementation of directive 92/32/EEC, (Brussels, 17 and 18 January 1995). The proposal was given a positive reception. The competent authorities of most of the EU member states and of Norway were interested in participating in the project. The European Commission (DG XI), also present at the conference, stressed the importance of the interchange of information and sharing of enforcement experience and welcomed the initiative of an inspection project.

For the organization of the project the Dutch Inspectorate contracted an experienced consultancy. The first action was to send a 'request for participation' accompanied by a proposal for a project plan, to all European Member States and to Norway. According to the project proposal, participation in the project requires attending three workshops and carrying out a certain number of company inspections. The response was overwhelming. The following countries indicated that they were interested and are now actually participating in the inspection project: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom.

The project includes three phases: the preparation phase, the operational phase, and the reporting phase. Each phase ends with a conference. Subjects of those conferences are subsequently: 1) preparation and working method; 2) problems and preliminary results and 3) the final report and future cooperation. Participants are committed to inspect a number of companies and to take (if necessary) some samples for analyses.

During the first conference in Leiden (the Netherlands) on May 15-17, 1995 enforcement and policy authorities from 14 European countries reached agreement on the project program. This meant that those countries would visit between 70 and 100 importers and producers of dyestuffs during 1995 and in the beginning of 1996. The dyestuff industry was selected because a desk study had shown that this sector is the most innovative in developing new chemical substances and it is well known that certain groups of dyestuffs have hazardous properties. The conference met at the end of the preparation phase and at the beginning of the operational phase.

A company inspection means: checking whether imported or produced substances (which can be part of a preparation) are in the European inventory of existing chemical substances (EINECS)<sup>2</sup>. In order to check this, one needs to know the chemical constitution of the product or the CAS-<sup>3</sup> and/or EINECS-numbers of all ingredients. During the conference participants agreed that minimal 25 dyestuffs would be checked per company.

### 2.3 Results so far

By now the project is in the operational phase. The first results of the project are emerging. Most countries have selected companies by using all different kind of sources, like custom agencies, product registers, and handbooks. Company visits are carried out and for problems related to those visits, a help-desk in the Netherlands is available. Participants are kept informed about each others activities by means of newsletters.

Company visits lead often to demanding problems, which require energy and creative solutions from the inspector. A problem, for instance, is the lack of knowledge of the regulation especially by importers of dyestuffs. Part of the companies are not aware of their obligations and know only the performance of a product rather than their chemical constitution.

In addition, suppliers of visited companies are not very keen to provide information about the chemical identity of a product. They are not familiar with the EINECS and, according to some of the visited companies, suppliers in Eastern Asiatic countries do not always know themselves the chemical constitution of a dyestuff. Hopefully producers, especially in those countries, will become more conscious of European obligations and the need to register chemical names and potential hazards of their products.

By means of sample analyses supplied information on the chemical constitution of a product is checked. In too many cases it happens that the given information is proven to be wrong. The credibility of other supplied information by the company is therefore questionable.

## 3 AN EXAMPLE FOR OTHER EUROPEAN PROJECTS

### 3.1 Positive results

Positive results so far are; increased cooperation between participating countries, sharing of knowledge and improved control methods by discussing results and using each other's capacities. Probably all participants underwrite the preliminary conclusion that the enforcement in every participating country improved during this NONS-project and is stimulated by new ideas about enforcement methods.

Another result of this project might be a strong signal to policy-makers and the European Commission concerning problems in enforcing this directive. This may lead to a modification of some essential regulations. By now major differences are seen in, for instance, national legislation concerning the registration of the chemical constitution of products by companies.

gaining experience might be an impulse for maintaining an appropriate enforcement level on this area. On the other hand countries which already have an enforcement history on this area learn to look critically to their enforcement methods and to sharpen them.

On several related areas the progress and results of the NONS-project are followed with interest. For instance, the Existing Substances Regulation might be the next European Enforcement project to be started in this area. For this regulation one might expect enforcement barriers on international level, as its effectuation asks already a lot of cooperation between member states on policy level.

### 3.3 Conclusion

Being aware of the promising progress of this project and the enthusiastic participation of the fourteen countries, one might conclude that a project like this is very valuable and might serve as a blueprint for other European projects.

## REFERENCES

1. European Directive 92/32/EEC is the 7th Amendment of Directive 67/548/EEC on classification, packaging and labelling of dangerous substances, European Commission, 27 June 1967.
2. European Publication C 146A, European inventory of existing chemical substances (EINECS); 15 June 1990, Brussels; this inventory was made during the eighties and is meant to make a distinction between 'new' and 'existing' chemical substances.
3. The CAS-register (chemical abstract service) is a kind of chemical library. Every substance which has been published is given a reference number in order to facilitate literature searches. Substances in EINECS are numbered and cross-linked with their CAS-number. So having a CAS-number might be an entrance to check whether a substance is in EINECS.

## THEME #4:

### INTERNATIONAL CAPACITY BUILDING

Theme 4 papers address the following issues:

- capacity-building goals for this organization;
- expertise, materials, training, and/or support available or planned;
- priorities established for supporting capacity-building needs;
- how requests are made; and
- successes achieved.

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1. The Evolving Role of Citizens in Environmental Enforcement, <i>S. Casey-Lefkowitz, W.J. Futrell, J. Austin, S. Bass</i> .....	221
2. International Capacity Building for Industrial Compliance and Enforcement — The UNEP Experience, <i>J. Aloisi de Lardere, J.H. Skinner</i> .....	237
3. UNEP's Role in Capacity Building in Environmental Law, <i>L. Kurukulasuriya, Donald Kariary</i> .....	243
4. International Capacity Building for Environmental Compliance and Enforcement, <i>S. Becker</i> .....	255
5. World Bank Supported Environmental Institutional Building Investments, <i>J. Aden</i> .....	275

See also papers in Theme 2: Principles of Environmental Compliance and Enforcement.

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See related papers from other International Workshop and Conference Proceedings:

- (1) Establishing International Networks—UNEP IE/PAC Experience, *J.H. Skinner*, Volume II, Oaxaca, México
- (2) Principles of Environmental Enforcement and Beyond: Building Institutional Capacity, *C. Wasserman*, Volume I, Oaxaca, Mexico
- (3) Principles of Environmental Enforcement, *C. Wasserman*, Volume I, Budapest, Hungary



## **THE EVOLVING ROLE OF CITIZENS IN ENVIRONMENTAL ENFORCEMENT**

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### **SUMMARY**

In many countries of the world, citizens interested in environmental issues are experimenting with participation in development planning and governmental decisionmaking. However, only in a few countries have governments and citizens developed workable mechanisms for public participation in environmental enforcement. This paper reviews why it is important to encourage citizen participation in environmental enforcement efforts and outlines the main elements which citizens have found necessary to ensure their participation, such as legal rights and remedies, clear environmental standards, and access to information. The paper then outlines common strategies for public participation in enforcement which are being initiated in many countries at the national level, such as citizen monitoring and inspection, public complaint mechanisms, and citizen enforcement suits. It concludes with a discussion of new options for transboundary public participation in enforcement and examples of how international networking and cooperation is building capacity and infrastructure in the non-governmental community to take on the challenges of meaningful participation in enforcement efforts.

### **1 WHY ENCOURAGE CITIZEN PARTICIPATION IN ENFORCEMENT?**

The two past International Conferences on Environmental Enforcement in Budapest, Hungary (1992) and in Oaxaca, Mexico (1994) established the principle that citizen participation is an important supplement to governmental enforcement efforts.<sup>1</sup> Still, examination of the situation shows that in many countries citizens are often overlooked as one of a nation's greatest resources for enforcing environmental laws and regulations. It has been acknowledged in international fora, such as the 1995 Conference of European Environment Ministers in Sofia, Bulgaria, that citizens know the country's land and natural attributes more intimately than a government ever will; that their number makes them more pervasive than the largest government agency; and that seeing citizens as part of the enforcement team helps shield an agency from isolation and builds broad-based popular support for what can be controversial enforcement actions. Yet, in many countries citizens and non-governmental organizations (NGOs) are still struggling to assure the fundamental legal basis for citizen enforcement.

A fisherman out on the river 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 experiences working in the mines, of making environmental standards for mines easier to administer and enforce. A trade association convenes small businesses to craft consensus on new regulatory measures, thus avoiding protracted litigation. 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. Public participation strengthens governmental authority; improves environmental decision-making; encourages sound business practices for sustainable development; and strengthens civil society. Participation and authority are two sides of the same coin. The government that encourages broad public participation is capable of mobilizing effective popular support of its policies. Its authority is legitimate. Citizens want the state to govern effectively and realize that at some point implementation demands authority.

Yet tension sometimes arises between the government and the governed. 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.<sup>3</sup> 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. 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. Or they may attribute government inaction to bureaucratic inertia. Either way, agency enforcers often are seen as overlooking or impeding environmental protection goals.<sup>4</sup>

If properly channelled, 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 requiring the government to perform its assigned regulatory duties. And in instances when the government insists on inaction, citizen action can replace government enforcement. Not only may compliance be achieved, but the government can be required to account publicly for its own inaction.<sup>5</sup>

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. The sheer size of the citizenry, for example, enables individual citizens to monitor compliance throughout the nation and identify violations that 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.<sup>9</sup> 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 role, even the most sophisticated system of environmental protection laws may exist only on paper. 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.

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## 2 LAYING THE GROUNDWORK FOR EFFECTIVE PUBLIC PARTICIPATION

Effective citizen participation requires more than a willing citizenry. Both in countries like the United States where citizen involvement in enforcement is fairly common, and in countries like Hungary where it is just beginning, there are several fundamental regulatory and institutional elements that are necessary for effective citizen participation. These prerequisites are legal rights and remedies, access to information, and clear environmental standards. Where even one of these elements is missing, citizens find it very difficult to participate in the environmental enforcement process.

### 2.1 Legal rights and remedies

Citizen participation in the environmental enforcement process is usually built around 1) the recognition of certain rights beyond personal property rights and the recognition of citizens or environmental organizations' ability to represent the public interest; and 2) the existence of an independent and well-informed judiciary which can adjudicate and enforce these rights.

Many newer constitutions, such as the one in Colombia, are guaranteeing citizens the right to a healthy environment. In other countries, such as 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. In still other countries, such as Mexico, the constitution guarantees a right to petition, which constitutes a vehicle for the public to direct inquiries to the government to which the government must respond in some manner!<sup>9</sup>

Alternatively, in some countries environmental statutes themselves give a cause of action to individuals to enforce the law when the government is not taking action. This system has been largely developed in the United States over the past twenty years with citizen enforcement suits being expressly included in the major federal environmental laws. For example, in the United States, despite enactment of the Resource Conservation and Recovery Act in 1976, the Environmental Protection Agency did not even begin to regulate hazardous waste until four years later, when required to do so by court order in a citizen suit! However in the last few years, citizen groups in other countries have had growing success in bringing such cases.

Granting citizens the ability to bring enforcement suits, however, does not necessarily mean that citizens will be able to do this in practice. Citizens also need to consider costs. For example, 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. However, because of the risk that the plaintiff will have to pay defendant's costs and fees, these suits have not been commonly used!<sup>12</sup>

Another hurdle for citizens can arise if government agencies and courts are reluctant to grant standing to citizen groups in administrative or court proceedings. Even where laws say that any interested group may become a party to a proceeding, this access is often denied to citizen groups. For example, in Slovakia, a forest protection NGO tried to become a party to an administrative decision under a local forestry plan. The Ministry of Agriculture and subsequent court decisions denied the NGO standing, even though the Slovak Administrative Procedure Act states that any interested person may become a party to the proceeding. As of March 1996, the case was before the Slovak Supreme Court which agreed to hear the standing issue. In only a few countries, have courts determined that environmental organizations in a civil proceeding can represent the interests of the environment as a public interest. For example, in the 1986 De

Nieuwe Meer case, the Dutch Supreme Court recognized the standing of an NGO to defend the environment as a public interest.<sup>13</sup> It was the first time that it was not necessary to prove that a specific individual interest had been harmed.

In systems that rely on judicial, rather than administrative mechanisms for enforcement, an independent judiciary becomes an essential element of citizen enforcement. In many legal systems, such as in Europe, it is normal for the judiciary to be at least partially under the control of the executive branch. When this is combined with a legacy of a totalitarian regime, it may mean that the judiciary is too closely tied to the executive bodies to allow citizen enforcement actions against the government. For example, in the Russian Federation, environmental organizations have had difficulty convincing lower level courts to take their cases against the government seriously. However, some Constitutional Courts have been active in protecting constitutionally guaranteed rights, such as the right to a healthy environment. The Hungarian Constitutional court can be counted among the success stories in its region in helping to promote the rule of law and consequently a sound basis for public participation. The court held in a 1994 decision that amendments to the Law on Agricultural Cooperatives violated the constitutional right to a healthy environment by lifting protected status from certain lands. The court found that the constitutional right to a healthy environment required the state to give legal and institutional guarantees to environmental protection.<sup>14</sup>

As a result, many countries in Central and Eastern Europe have reorganized their lower court systems.<sup>15</sup> The major focus of such changes has been to ensure the independence of the judiciary from other branches of government. At a minimum, the power of appointment and removal and the control of resources available to carry out the judiciary's tasks need to be guaranteed. In some countries, the judiciary slowly is achieving the necessary independence. In Slovenia, for example, judges have been given life tenure, freeing them from dependency on the executive branch for their livelihood.

In addition to independence, citizens need a judiciary which understands environmental law and is receptive to its special needs in the court. Moreover, in countries in transition for example, many judges still carry assumptions from the previous regime, including supremacy of government production quotas and a relative lack of concern with environment. A case in Estonia where a lower court admonished a local environmental administrator for appealing to the courts to push the central authorities to rectify inconsistencies in law and regulation illustrates this point. That judge was later overturned by the National Court which found the administrator's case to be proper.

## 2.2 Accessible information

Access to information is the cornerstone of effective public participation at all levels of decisionmaking. For environmental enforcement, the public needs access to specific information concerning discharges and emissions, such as the discharge monitoring reports required in the United States or the toxics release information required in countries with a pollutant register system. Yet, in many countries access to this type of information is limited or not allowed.

The degree of development of legal regimes for public access to government-held information varies from country to country. In many countries, recently amended constitutions and national environmental laws grant the citizen the right to have access to information, but fail to provide implementation and enforcement mechanisms. This is the case, for example, in the Czech Republic. The Czech constitution guarantees a right to information, however, the Czech government has been reluctant to draft an implementing law providing for public access to government-held environmental information. In addition, the government has been reluctant to

use the constitutional right to allow actual citizen access to environmental information without an implementing law. Instead it limits access to environmental information to the relevant provisions of the environmental impact assessment law.

Only a few countries allow citizens to request and receive from the government environmental monitoring data and discharge reports. Experienced environmental litigators in citizen groups warn that any environmental program that requires citizens to gather evidence, take samples, perform tests on effluents will present almost impossible barriers to a successful citizen suit.

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.<sup>6</sup> For example, the U.S. Federal Water Pollution Control Act requires that the holders of permits to discharge effluents from point sources submit regular discharge monitoring reports (DMRs) to the government.<sup>7</sup> These reports are usually accepted by courts as definitive proof of a violation, since they are written and filed by the alleged violator itself. However, especially in emerging democracies, environmental laws usually do not contain monitoring and self-reporting requirements. Even when such requirements are in place, citizens in countries in transition have expressed a distrust of such systems being enforceable and trustworthy.

Access to information concerning permit conditions and regulatory standards are also necessary to verify whether a violation has taken place. It is fairly well accepted that the public has the right to access information concerning regulatory standards. It is less well accepted, however, that the public has the right to access information concerning decisions affecting a regulated entity (e.g., permits, licenses, etc.). For instance, in most of the European Union, the Council Directive on access to environmental information has been interpreted to include access to information concerning draft and final permit decisions.<sup>8</sup> Still, in Slovakia where the Ministry for Environment is currently drafting legislation concerning access to environmental information, the Ministry interpretation, as of March 1996, is to exclude permit information from the definition of "environmental information" accessible under the law.

Systems with publicly accessible information concerning toxic releases are slowly spreading to other countries from the United States. These laws typically provide for databases where the government compiles information provided by industry on toxic chemicals stored, transferred, or released and provides for access by the public to this information. These types of "right-to-know" provisions have helped citizens to identify and prove environmental violations. In the U.S. the Emergency Planning and Community Right-to-Know Act (EPCRA), imposes extensive self-monitoring and reporting requirements on certain industries that use and release extremely hazardous chemicals.<sup>9</sup> A growing number of countries are developing laws concerning toxic release inventories (TRI) or pollutant release and transfer registers (PRTR). For example, in the Czech Republic, the government is working together with a coalition of environmental organizations and other sectors of the public to develop a pollutant release and transfer register.

### 2.3 Clear environmental standards

Clear standards of conduct against which the behavior of potential violators can be compared are the final prerequisite for effective citizen participation in enforcement efforts.<sup>9</sup> When a citizen is provided with specific emission levels, deadlines for compliance, or other definite substantive requirements contained in statutes, regulations, or permits, it is easier to identify and prove the violation. Such substantive requirements are particularly effective when used together with industry self-monitoring obligations, reporting schedules, or other information access mechanisms. Clear standards may be provided for in statutory language, regulations developed by agencies in accordance with statutory duties, or industry-specific permits issued

pursuant to the regulations. The only question at issue in most enforcement actions should be: did the defendant violate the standard set forth in the law, regulation, order, or permit. In the United States, for example, compliance is a matter of strict liability and a defendant's intention to comply or good faith attempt to do so does not excuse a violation.

A law which simply prohibits "harmful" or "dangerous" pollution would be very difficult to enforce consistently; it might serve as a safety net, but experience has proven that enforcers need clear standards to avoid debates over scientific and policy issues. The more scientific and policy issues are resolved by statute, regulation, or permit, the easier and more cost-efficient enforcement becomes. Thus, for example, laws that set a standard for water quality in a stream, but fail to set an end-of-pipe standard would still be difficult to enforce. Unless there is a clear standard of how much may be released from each pipe, enforcers will be burdened with proving that it was the defendant's discharge which violated the water quality standard. Such causation issues can become very complicated, especially given the complex scientific issues surrounding release, combination, and dilution of chemicals in a stream.

### **3 MAKING PUBLIC PARTICIPATION WORK**

Environmental organizations and governments in many countries have been experimenting with innovative methods for increasing citizen involvement in monitoring and inspection, as well as the use of citizen complaint and enforcement mechanisms.

#### **3.1 Citizen monitoring**

The growing number of environmental problems and the increasing demands on limited government resources combine to strain the resources of environmental agencies to perform all the necessary investigatory and monitoring duties. Monitoring alerts the government not only to possible violations of the law, but also to potential damage or threat to the public health and safety. However, in general, public participation in monitoring compliance with laws and permits is very limited. With a few exceptions, the public and NGOs usually do not have proper technical equipment or the practical possibility to undertake monitoring.

In some countries, governmental institutions make use of citizen monitoring which may already be taking place. For example, in the U.S., some citizen organizations have begun harborwatch programs to identify oil spills or other emissions in local harbors. Others teach citizens to walk streams, identifying locations of pollutant emissions and observing the effects of these emissions on water quality or indicator species. The Izaak Walton League of America trains citizens in this way. The citizens then report information to a national clearinghouse, which notifies state or federal agencies. State agencies also help fund the League's training and reporting programs.

Another vehicle for public participation is the establishment of coordination agreements between the government and public organizations. For example, in Mexico, such coordination agreements provide for joint activity on a particular issue or problem. The Mexican Federal Ecology Law envisions coordination agreements between government environmental agencies and the public aimed at facilitating joint administration, conservation and monitoring of protected nature reserves.<sup>21</sup>

The opportunity for post-project monitoring usually falls within the environmental impact assessment (EIA) process. However, in practice, monitoring is the weak point of most EIA regimes. Most EIA regulations do not explicitly require any monitoring. Yet, without monitoring, there can be no guarantee that conditions imposed by the decisionmaking body on the project proponent

are being implemented. Monitoring also provides an opportunity to assess the accuracy of impact predictions and the effectiveness of proposed mitigation measures, thereby contributing to the design of future projects and the improvement of future EIAs.

Where national EIA legislation does require some type of monitoring, it rarely specifies whether that includes citizen participation<sup>22</sup>. However, there are some exceptions. For example, in the Philippines, once the environmental compliance certificate is issued, compliance monitoring is normally conducted by the Department of Environment and Natural Resources (DENR) regional offices as part of their standard regulatory and enforcement procedures<sup>23</sup>. But, with the emergence of the concept of multi-partite monitoring, a monitoring team consisting of representatives from the DENR, the project proponent, NGOs, and local community residents may jointly undertake compliance monitoring. For example, to ensure that industrial developers comply with environmental standards set by the government in the ongoing development of a major industrial corridor in Northern Mindanao in the Philippines, representatives of local communities, together with NGOs and government agencies, organized a task force to monitor compliance. The Philippine DENR is creating in each regional office a Regional Community Advisory and Monitoring Committee whose membership will include NGOs and the private sector. The Committees will be involved in all phases of EIA, including compliance monitoring.

Post-project monitoring can also be required in the permitting process. For example, in the Czech Republic, citizen involvement was encouraged during a public participation experiment in Ostrava in 1992 which included post-project monitoring<sup>24</sup>. A facility for the reprocessing of used mineral oil has been permitted with the condition that an independent citizen's commission be established to control implementation of the permit conditions. In theory this process could also be used in the Czech Republic for EIA post-project monitoring. The Czech Administrative Code allows for the establishment of a special commission on post-project analysis for each particular project to ensure application of a sound administrative permit.

### 3.2 Citizen inspections

In some countries, government agencies are allowed to contract with citizen groups or other associations to enlist their assistance in inspection efforts. For example, in Estonia, under the Nature Protection Act, citizens can be deputized as "public inspectors." They are allowed to write protocols about violations of nature protection rules, but they cannot take payment. These public inspectors monitor compliance with laws, regulations, and permits concerning hunting, fishing, and forestry<sup>25</sup>.

In Poland, a similar institution exists in the form of the Nature Protection Guard, which was established 1957<sup>26</sup>. This is an organization affiliated with conservation associations. Its aim is to monitor compliance with nature conservation laws and its members have powers similar to forest rangers. Authorized members of the Guard have the right to enforce nature conservation laws directly through a procedure of ticketing violators and imposing a small fine. However, Poland has been slower at transferring this model to the pollution control area. The Polish Environmental Protection Act of 1980 provides for the existence of a number of institutions meant to facilitate public participation in monitoring compliance. For instance, trade unions and other associations can function as civic environmental protection bodies with in-house environmental commissions or inspectors to monitor a company's environmental performance. However, this model has not had much chance to prove itself, partially because the Council of Ministers has not issued the necessary regulations.

Some countries allow citizens to demand inspections under limited circumstances. For example, in the Czech Republic, under the Building Act, parties to the land planning decision and investment permitting process have the right to demand the inspection of facilities prior to and

subsequent to completion. Another example can be found in Argentina where water quality legislation allows private parties who have filed a complaint about a facility to participate in any inspection of the facility during the investigation.<sup>27</sup> The U.S. Surface Mining Control and Reclamation Act of 1977 contains a similar provision<sup>28</sup>

### 3.3 Public complaint process

The public complaint process is one of the most common mechanisms for public input in environmental enforcement. The process usually allows any person to file a complaint with the state regarding activities that are causing environmental harm or ecological imbalance. The state or municipal government is then required to look into the matter and provide a response within a relatively short period of time.

Some countries have an independent complaint committee or designated staff member (ombudsman) at the national or local levels. Citizens can lodge their complaints with the committee whenever they disagree with any measure taken by the government. The institution is usually funded by, but independent of, the government and is competent to deal with complaints on the basis of statutory rules. The law providing for the creation of an ombudsman also regulates what kinds of complaints may be reviewed. In many cases, the publicity achieved through the complaints puts pressure on the violator to address the situation at hand.

The ombudsman, as an officer of parliament with the power of oversight over organs of state administration, is established under the constitutions of nine countries in Central and Eastern Europe. Yet, this institution has not been fully implemented in this region. Ombudsmen have only taken office in five countries, as of late 1995, three of these only during 1995<sup>29</sup>. Only Poland has had substantial experience with an ombudsman in place. Nonetheless, the recent appointments may indicate the momentum for ombudsmen is building and the next few years will be critical ones in determining the long-term viability of such an institution in this region.

In many countries, however, there is a more informal complaint mechanism or petitions are used. For example, in Bulgaria, citizens and NGOs can petition or make a request to environmental authorities if they discover violations of environmental law or regulations. In Albania, there is a new energy law which specifies that citizens claiming legal violations on the part of a license-holder have the opportunity to file written complaints with the licensing agency, which is obliged to require a response from those permit-holders. This has not yet been implemented or tried in practice. In Mexico, the federal and state Ecology Laws contain provisions enabling any person to file a complaint with the government regarding activities that are causing environmental harm.<sup>30</sup> The state or municipal government agency is required to look into the matter and provide a response within a relatively short period of time. In practice, the public complaint process appears to be among the most widely used means of bringing government attention to environmental violations and enforcement problems. In Mexico, state enforcement officials in Nuevo Leon found the public complaint process so useful that they established a special telephone hotline to facilitate receiving citizen complaints<sup>31</sup>.

### 3.4 Citizen enforcement actions

In many countries, citizens are allowed to take legal action to enforce environmental laws, either under constitutional rights, under specific provisions in environmental laws, or in accordance with administrative or civil codes. Legal action by citizens has been used to enforce environmental regulations and duties against both governmental institutions and private entities. Most public participation opportunities provide citizens with the opportunity to give their comments. However, to participate effectively, citizens must also have some way to ensure that their comments are considered and that the laws and procedures are properly implemented. Political pressure

can be used on elected officials, but special avenues are needed to challenge decisions of non-elected officials. Without an administrative or judicial review process of agency decisions, public participation in decisionmaking can be an empty gesture<sup>2</sup>

Avenues for direct public participation in enforcement include allowing citizens to intervene in government enforcement proceedings through filing friend-of-the-court briefs, allowing citizen participation in reviewing the terms of settlement decrees, allowing citizens to bring administrative review proceedings, and allowing legal action to be brought by citizens to enforce environmental law against the government or against violators<sup>3</sup>

Government agencies are usually granted a great deal of discretion in deciding enforcement priorities. However, in the United States, Congress supplemented governmental enforcement with citizen enforcement rights. This is done through explicit provisions in the major national environmental statutes granting members of the public the ability to enforce the law directly against violators or to bring a suit against a government agency for failing to carry out duties that are not discretionary (for instance, missing a statutory deadline). In the U.S., federal environmental statutes grant "any person" the right to bring a citizen suit, with "person" defined broadly to include individuals, corporations, associations, and governments. In most cases, citizens need only show primarily that the law was violated, not that there was fault or causation linked to actual or threatened harm. The cases usually result in certain action being ordered by the court, or in civil penalties being awarded to the government. Citizens do not usually collect compensation for personal injury or property damage in enforcement suits. However, if citizens succeed on any significant issue in litigation, they may be awarded attorneys fees, determined by the court.

It is also common in the U.S. for environmental cases, including citizen suits, to be settled during the lawsuit. To ensure that settlements are enforceable, they are often crafted as court negotiated consent decrees, with interim deadlines for specific actions and penalties. In addition to citizen suit settlements, citizens who are parties to or have an interest in a government enforcement suit often may participate in negotiating the terms of the consent decrees.

Citizen groups in many other countries have been experimenting over the past ten years with varying forms of citizen suits, such as defense of the public interest under the civil code. Under Colombia's Civil Code, citizen groups have the right to bring cases or "popular actions" (acciones populares) to enforce the law. The code gives the right to stop the threat of harm to the public interest to an indeterminate group of people. Suit can be brought against any public or private person causing threat of harm. However, the plaintiff must show fault and causation, not simply a violation of the law. The Dutch Civil Code defines an unlawful act as any act which neglects to fulfill a general legal duty<sup>4</sup>. However, again, the definition of "unlawful act" also includes fault, damage, causation, and "relativity" (the legal norm that has been violated must have the purpose of protecting the injured person). Such requirements of proving negligence, damage, causation, and relativity place an extra burden on citizen groups trying to enforce the law.

#### **4 TRANSBOUNDARY PUBLIC PARTICIPATION IN ENFORCEMENT EFFORTS**

In many countries, industrial and other activities in the border region affect both their own populations and those of neighboring countries. It is a generally recognized principle of international law that a country should not harm the environment of another country<sup>5</sup>. If this occurs, the affected country can hold the country of origin accountable, and if necessary take the matter to court, even to the International Court of Justice.

In general, granting legal rights for the public to participate in enforcement efforts under international treaties has not yet been broadly implemented or exercised. Until recently, inter-governmental agreements only rarely included rights of the individual citizens of the States in their provisions. Recent international treaties, such as those concerning transboundary watercourses and transboundary results of industrial accidents provide for limited public participation.<sup>36</sup> Public participation in a transboundary context means that citizens on both sides of a border have the same rights to access to information and legal remedies.

Until the United Nations Conference on Environment and Development in 1992, and the preparatory process which started several years prior to that, there was very little mention of the "public" or of "individuals" in international environmental treaties. In general, there are several points in a typical treaty that have at times allowed participation, or at least access to information, by individual citizens (or by NGOs). These are: 1) the meeting of the Conference of the Parties; 2) EIA procedures; 3) exchange of information procedures; and 4) access to courts. For example, the 1992 Convention on the Transboundary Effects of Industrial Accidents grants a citizen from the affected country access to judicial and administrative proceedings in country of origin. In the 1993 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, non-governmental organizations which have the goal of protecting the environment, in accordance with national law, may make certain requests to administrative or judicial bodies in the country of origin concerning prohibition of a dangerous activity or requirement of preventative measures.

The environmental side agreement to the North American Free Trade Agreement ("NAFTA") created several mechanisms for public participation in promoting the enforcement of national environmental laws in the U.S., Mexico and Canada. Citizens may submit a complaint to the North American Commission for Environmental Cooperation (the "Commission") whenever they believe a party is failing to effectively enforce its environmental law. The Commission can also be requested to prepare report on environmental matters related to its cooperative functions.

The public was responsible for bringing a major transboundary environmental case to the attention of the Commission. During the winter of 1994-95 between 20,000 - 40,000 migratory water birds died in the Silva Reservoir in the central Mexican State of Guanajuato. As a result of a petition filed by U.S. and Mexican NGO's, the Commission assembled a team of scientists from the three NAFTA countries to determine what killed the birds. Although it was originally believed that industrial pollutants were entirely to blame for the deaths, the scientific panel concluded that the cause of mortality of water birds at the reservoir was botulism, often caused by raw sewage. The panel then recommended several efforts and management options for improving environmental conditions at the reservoir.

Another example of transboundary public participation in enforcement can be found in Western Europe in a case concerning the dumping of pollutants in the river Meuse. In 1993, a Dutch court heard a case brought by a coalition of NGOs against the steel manufacturer Cockerill Sambre alleging the illegal discharge of pollutants into the river Meuse in Belgium. In its verdict, the court obliged Cockerill to take bi-monthly measurements of the amount of chemicals released in one day and to send these measurements to the environmental groups for monitoring. The plaintiffs had the authority to bring the case in the Netherlands due to a 1976 European Court decision that in a case concerning an international misdemeanor, the injured party could chose the court. The European Court decision is an interpretation of the European Execution Treaty which regulates the mutual recognition and execution of legal verdicts.<sup>38</sup> Belgium and the Netherlands are both party to this treaty.

## 5 INTERNATIONAL COOPERATION AND CAPACITY-BUILDING

In most countries, there are only a handful of environmental NGOs and lawyers working to ensure public participation in implementation and enforcement of environmental law. However, there are expanding international and regional networks of environmental professionals assisting each other in building the capacity of local NGOs to participate in this area. International cooperation and support is an important element to many environmental enforcement campaigns. In cases where the developer or industry is from another country, outside information about the firm's background and practices can be essential in public enforcement efforts. International attention can also put pressure on a firm to come into compliance or lose goodwill, as well as putting pressure on a government that may have been reluctant or unable to place resources towards a specific environmental enforcement effort. Finally, exchanges of information concerning public participation strategies and tools provide an opportunity for NGOs to learn from each others experiences.

An example of a structured network for assistance in the most direct type of public enforcement effort — citizen enforcement suits — is the Environmental Law Alliance Worldwide (E-LAW).<sup>39</sup> E-LAW is an international network of public interest environmental attorneys dedicated to collaborating across borders and sharing information in defense of the environment. E-LAW has nineteen offices around the world and has worked with environmental advocates in more than 50 countries. E-LAW uses electronic mail to give these attorneys access to vital scientific and legal information for use in their cases.

A more loosely structured network of public participation activists can be found in Central and Eastern Europe. Coordinated through the Public Participation Program of the Regional Environmental Center (REC), environmental advocates wishing to promote public participation in their countries have been coming together since 1992 to exchange information on strategies used in their countries and to work together to develop country guidelines based on practical experience.<sup>40</sup> This network has served to build local capacity for public participation throughout most of the region, focusing on both legal and informal tools.

A third type of cooperation in environmental enforcement is the IUCN Commission on Environmental Law.<sup>41</sup> The Commission brings together environmental law experts from all regions of the world to think through issues of environmental law implementation and enforcement. The Commission focuses both on tools for implementation of national law, such as environmental impact assessment, and on tools for implementation of the international treaties. Commission members are involved in the current process of drafting a new Convention on Public Participation, which was mandated after the European Environment Ministerial Conference in Sofia in 1995.

An example of cooperative efforts within the IUCN Commission can be found in the Western Hemisphere. In cooperation with the Commission, eight law centers from the Americas have joined forces to address one of the fundamental conditions threatening the biodiversity of the Americas and impeding the sustainable development of local communities: the lack of adequate national laws regulating access to and compensation for local genetic resources. The Biodiversity Convention, which came into force in December 1993, establishes a broad framework for national systems to conserve and manage biological resources. To assist in the development and implementation of these systems, the eight law centers are working cooperatively to produce a comparative analysis of laws regulating access in each of their countries. The study will also identify options and recommendations for reforming existing national laws on access and compensation.

Environmental law professionals in the Americas also have collaborated on efforts to disseminate information and provide training on the development and use of citizen enforcement tools. In July 1994 U.S. and Mexican environmental lawyers teamed to present a workshop for

community leaders in Southern Mexico on basic legal tools for the conservation of natural resources and environmental protection. In September 1993 the Environmental Law Institute, the Defensoría del Pueblo, and the Fundación para la Defensa des Interés Público presented an international seminar in Bogotá, Colombia on new tools for exercising collecting rights, bringing together experts from throughout the region.

In addition to networks of individuals working on environmental law implementation and enforcement, the U.S.-based Environmental Law Institute (ELI) tried to build the environmental law profession.<sup>42</sup> ELI's focuses on building capacity of the institutions that are essential for a workable system of environmental protection. It increases the effectiveness of legal practitioners and other professionals through training and education. It transfers the best "legal technology" — the tools that have been proven to work in conserving natural resources and public health to other environmental professionals around the world. One example of this type of capacity building is judicial training which ELI has sponsored in the Americas and in Central and Eastern Europe. As mentioned earlier in this paper, a judiciary which understands the basic concepts of environmental law and is open to citizen environmental enforcement efforts is crucial to effective citizen participation in enforcement. For example, after a 1995 judicial training workshop co-sponsored by ELI and the Ukrainian environmental law group Ecopravo, the participating judges concluded that Ukrainian trial judges not only must take new environmental legislation seriously, but must play an active role in its development and implementation.

These types of formal and informal cooperation through networks of environmental professionals have been essential to spreading experiences with new techniques for public participation in enforcement efforts and for building capacity in local NGOs and in local legal structures to support such efforts.

## 6 CONCLUSION

With the progress of democracy, more and more citizens understand their role, rights and responsibilities related to social and political environmental conflicts and are more willing and able to supplement governmental enforcement of environmental law. The basic groundwork for public participation has been laid in many countries in the form of basic constitutional rights, environmental protection laws, and specific public participation procedures. In a few countries, it can be said that the legislation is more than mere declaration. However, most countries are still at the initial stages of creating a system which is conducive to making good use of the public as a partner in enforcement efforts.

## ENDNOTES

1. Starting in 1990 as a collaborative effort between the U.S. Environmental Protection Agency and the Netherlands Ministry of Housing, Spacial Planning and the Environment (VROM), the International Conference on Environmental Enforcement has become a highly successful international collaboration to build effective environmental compliance and enforcement programs. Already in the 1992 Budapest Conference, the citizens' role in enforcement was a central theme, focusing on why citizen involvement was important and on the techniques developed in the United States and Western Europe to facilitate this involvement.

2. The examples in this paper are based mostly on the authors experiences working with colleagues in Central and Eastern Europe and in Latin America.
3. See Cross, "Rethinking Environmental Citizen Suits," 8 Temp. Env. L. & Tech. J. 55, 64-70 (1989).
4. See "Private Watchdogs: Internal Auditing and External Enforcement — Three Perspectives," 17 Env'tl. L. Rep. (Env'tl. L. Inst.) 10,255, 10,263 (1987) and Snook, Robert D., "Environmental Citizen Suits and Administrative Discretion: When Should Government Enforcement Bar a Citizen Suit?" Nat'l. Env'tl. Enfor. J., Apr. 1995, at 3.
5. 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).
6. See Environmental L. Inst., An Analysis of Citizen Enforcement Actions under EPA-Administered Statutes V-11 to V-12 (Sept. 1984) [hereinafter ELI Study].
7. See Webb, "Taking Matters into Their Own Hands: The Role of Citizens in Canadian Pollution Control Enforcement," 36 McGill L.J. 770, 819 (1991).
8. 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 6, 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).
9. See *Participation and Litigation Rights of Environmental Associations in Europe* (M. Führ & G. Roller eds. 1991).
10. Environmental Law Institute, *Draft Report Decentralization of Environmental Authority in Mexico: A Review of the Legal and Institutional Framework for Environmental Protection at the State Level* (forthcoming 1996)
11. See *Illinois v. Costle*, 9 ELR 20243 (D.D.C. Jan. 3, 1979).
12. *Supra* note 9.
13. See *MilieuKontakt, Dutch Environmental Organizations Go to Court* (Amsterdam 1994) [hereinafter MilieuKontakt Report].
14. Magyar Közlöny, 1994/No.55 p1919.
15. Regional Environmental Center for Central and Eastern Europe, *Status of Public Participation Practices in Environmental Decisionmaking in Central and Eastern Europe*, September 1995.

16. 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 6, at V-12 to V-13.
17. Federal Water Pollution Control Act, 42 U.S.C. §125 *et seq.*
18. See MilieuKontakt Report, *supra* note 13.
19. 42 U.S.C.A. § 11001-11050.
20. See Babich, Adam, "Citizen Suits: The Teeth in Public Participation," 25 *Envtl.L.Rep.* 10141, Environmental Law Institute, March 1995.
21. *Supra* note 10.
22. Report of the International Roundtable on Practical Implementation of EIA in Central and Eastern Europe, Slovakia, November 1995.
23. Smith, David B., and van der Wansem, Mieke, Strengthening EIA Capacity in Asia: Environmental Impact Assessment in the Philippines, Indonesia, and Sri Lanka, World Resources Institute, June 1995.
24. Regional Environmental Center for Central and Eastern Europe, Status of Public Participation Practices in Environmental Decisionmaking in Central and Eastern Europe, September 1995 [hereinafter REC Case Studies].
25. *Id.*
26. *Id.*
27. Ley 13.577 Creación de Obras Sanitarias de la Nación, art. 31 and 32; Decreto 674/89 Regimen contra la Contaminación de Rios Bs. As. 24/V/89.
28. 30 U.S.C. § 1271(a)(1).
29. REC Case Studies, *supra* note 24.
30. *Supra* note 10.
31. *Id.*
32. Babich, Adam, "Citizen Suits: The Teeth in Public Participation," 25 *Envtl.L.Rep.* 10141, Environmental Law Institute, March 1995.
33. The mechanics of citizen suits are discussed in detail in the Environmental Law Institute's paper, "The Role of Citizens in Environmental Enforcement," which was delivered at the Third International Conference on Environmental Enforcement in 1995. Environmental Law Institute, The Role of the Citizen in Environmental Enforcement (ELI Working Paper, 1992).
34. Burgerlijk Wetboek, article 6:162, section 2.
35. This has widely been accepted as a general principle of international law based on Article 38(1)(c) of the Statute of the International Court of Justice See *also* Principle 21 of the Stockholm Declaration (1972) and Principle 2 of the Rio Declaration (1992).

36. Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 1992 and the Convention on the Transboundary Effects of Industrial Accidents, 1992.
37. The "Cockerill Sambre" case, District Court of Maastricht, 3 February 1993. For further information concerning this case, *see supra* note 13.
38. *See* Article 5, section 3.
39. E-LAW can be contacted through its U.S. office at 1877 Garden Ave., Eugene, Oregon 97403, telephone (541) 687-8454, facsimile (541) 687-0535, email: [elaw.usoffice@conf.igc.apc.org](mailto:elaw.usoffice@conf.igc.apc.org)
40. The contact for the REC Public Participation Project is Magda Toth Nagy at Regional Environmental Center, Miklós tér, H-1035 Budapest, Hungary, telephone (36-1) 250-3401, facsimile (36-1) 269-7210, email: [magdi@fs2.bp.rec.hu](mailto:magdi@fs2.bp.rec.hu)
41. The Commission can be reached through the IUCN Environmental Law Center, Adenauerallee 214, D-53113 Bonn, Germany, telephone (49-228) 2692-231, facsimile (49-228) 2692-250, email: [elcb@hq.iucn.ch](mailto:elcb@hq.iucn.ch)
42. Environmental Law Institute, 1616 P Street, N.W., Suite 200, Washington, D.C., 20036, telephone: (1-202) 939-3800, facsimile: (1-202) 939-3868, email: [HTTP://www.eli.org](http://www.eli.org)



## **INTERNATIONAL CAPACITY BUILDING FOR INDUSTRIAL COMPLIANCE AND ENFORCEMENT — THE UNEP EXPERIENCE**

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### **SUMMARY**

This paper covers the UNEP Industry and Environment (UNEP IE) office experience related to international capacity building for industrial environmental compliance and enforcement. The rationale or need for such capacity building is discussed, some of UNEP IE's capacity building programs outlined, and some observations on the goals of capacity building are made.

### **1 INTRODUCTION**

It is an honor for the UNEP Industry and Environment to be a co-sponsor of this Fourth International Conference on Environmental Compliance and Enforcement. UNEP appreciated the opportunity to work with the other conference sponsors and organizers, the Thailand Pollution Control Department, the US EPA, the Netherlands Ministry of Housing, Spatial Planning, and the Environment, Environment Canada, the European Commission, and the Environmental Law Institute and to participate in discussions of these timely and important subjects.

We are very impressed by the conference theme of International Capacity Building. This theme reflects the important need to bring together the combined resources and expertise of all elements of society to effectively deal with some of the complex health, safety and environmental issues of the future. This concept of capacity building through global partnerships and networks is clearly called for by Agenda 21 adopted at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992.

This paper outlines some of UNEP IE's programs for environmental capacity building in general, and in particular, our efforts with respect to capacity building for industrial environmental compliance and enforcement. Finally, it offers some observations on the goals of partnerships for capacity building.

### **2 INTERNATIONAL CAPACITY BUILDING AT UNEP IE**

The UNEP Industry and Environment program was established in 1975 to bring industry, governments and non-governmental organizations (NGOs) together to work towards environmentally sound forms of industrial development. UNEP IE was active in UNCED's preparation and participated in the various industry fora. Following UNCED, UNEP IE reviewed

its strategy and reoriented its activities to better support the initiatives of Agenda 21. A summary of some major activities with an emphasis on international capacity building follows.

### 2.1 Cleaner production

UNEP IE launched the Cleaner Production Program in 1990, in partnership with many organizations including OECD, EU, UNIDO, and the World Bank. This concept has now entered the sustainable development lexicon and is strongly supported in Agenda 21. Our Cleaner Production Program today includes: national cleaner production workshops held around the world, a publications series translated into several languages, ICPIC the International Cleaner Production Clearinghouse, the establishment of National and Regional Cleaner Production Centres in cooperation with UNIDO and a series of cleaner production demonstrations in China and Africa. The program networks with organizations and experts world wide and transfers information to a broad set of audiences. In September of this year, in Oxford, England, this program will be reviewed and discussed to assess progress made and suggest future directions.

### 2.2 APELL

The APELL Program (Awareness and Preparedness for Emergencies at Local Level) which promotes the prevention of, and response to, industrial accidents was developed in 1988 and was also acknowledged in Agenda 21. This is a good example of an international partnership actively developed by UNEP IE, the chemical industry (the International Council of Chemical Associations), and governments. The first step was to prepare the APELL Handbook which is now available in 14 languages, and which recommends national and local partnerships to prevent accidents and prepare for emergency response. Many APELL Seminars and Workshops have been held over the past five years reaching over 1000 local decision makers from industry, government, local authorities, and communities. Over 70 national governments now have APELL focal points which disseminate APELL information to appropriate industries and agencies on a nationwide basis and the APELL network links the members of this network.

### 2.3 OzonAction

UNEP IE is also responsible for the clearinghouse function envisaged in the Montreal Protocol on Substances that Deplete the Ozone Layer. The OzonAction Information Clearinghouse transfers information on ozone-depleting substances including: policy and technical options, descriptions of alternative technologies, an international directory of experts, document abstracts and news bulletins. Workshops, conferences and training activities are held around the world and country programs have been established to provide practical assistance to industry and governments to help phase out ozone depleting substances. Regional networks of ozone offices are being established under the auspices of UNEP, enabling the sharing of information and experiences on the implementation of the Montreal Protocol.

### 2.4 Tourism and transport

Agenda 21 cites the importance of tourism, one of the world's largest and fastest-growing industries, in promoting sustainable development. The UNEP IE tourism program, launched in 1991 involves partnerships with international organizations, particularly UNESCO and the World Tourism Organization, and has developed links with tourism industry associations. The program involves publications, training, technical assistance, networking and the preparation of guidelines on tourism and the environment.

## 2.5 EnTA

In 1993, UNEP IE launched a new program on Environmental Technology Assessment (EnTA). The goal of EnTA is to encourage the use of technology assessment as a tool to support the development and application of environmentally sound technologies that are consistent with sustainable development. Two specific goals are to encourage cleaner production and to discourage the export and use of technologies that pose potential environmental hazards, especially in developing countries. To guide this effort, an international advisory group has been established, and an EnTA Newsletter has been published. This year we will be issuing a primer and workbook on how to carry out an environmental technology assessment and will develop guidelines on the environmental information that technology importers can and should provide to importing countries. Also an important report to the Commission on Sustainable Development on survey of information systems on environmentally sound technologies was issued this year.

## 2.6 Sectorial activities and information transfer

UNEP IE sectorial activities provide comprehensive guidance to specific industry sectors to encourage improved environmental performance. Environmental management tools and technologies such as waste and energy audits are addressed. A series of technical guides have been prepared jointly with industry and over 15 industrial sectors have been covered to date. The response to these in other sectors show the need and demand for such technical guidance. The Industry and Environment Review is issued quarterly and is distributed to over 10,000 persons worldwide including government, industry and educational organizations. Each year UNEP IE responds to over 5,000 requests for information and documentation, and more than 500 researchers from academia, industry and government consult the UNEP IE library and database resources.

## 2.7 Consultation with industry, government and NGOs

UNEP IE has continuous consultation with its various partners in carrying out its programs and responsibilities pursuant to Agenda 21. UNEP IE has also held specific consultations on several subjects: voluntary codes of conduct, and corporate environmental reporting and sustainable consumption patterns. In a UNEP project on voluntary environmental reporting, more than 100 corporate reports on the environment were reviewed and some first guidelines on environmental reporting, were discussed. In a cooperative effort with the International Chamber of Commerce (ICC) and The International Federation of Consulting Engineers (FIDIC), UNEP IE recently issued an Environmental Management System Training Resource Kit to help build environmental management capacity of industrial managers. UNEP IE will continue to encourage industry codes of conduct that promote voluntary compliance with environmental policies.

### 3 CAPACITY BUILDING FOR ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT

Over the last few years, many governments have established environmental laws and regulations to protect their country's environment and provide a level playing field for industry competition. But the institutional capacities needed to ensure that all companies are equally complying with the environmental standards are often weak or lacking. In order to assist governments build their institutional capability to carry out environmental compliance programs, UNEP IE in 1992 published a report entitled From Regulations to Industry Compliance: Building Institutional Capabilities

To build on this earlier work, UNEP IE, in cooperation with US EPA, VROM and an international working group, developed a training manual to help governments develop their institutional ability to ensure industry compliance with the country's environmental standards. The training manual entitled Industry Environmental Compliance: A Training Manual provides the context, examines different approaches, identifies critical elements of success and discusses options when resources are limited in developing an effective compliance and enforcement program. It promotes an integrated approach to help steer industry towards cleaner production options rather than end-of-pipe solutions to meet environmental requirements.

The training manual consists of four separate modules. The first module on institutional aspects examines:

- why an effective compliance and enforcement program is important;
- its objectives and functions;
- its optimal hierarchical position, degree of centralization and integration;
- the optimal balance between the inspection, permit and enforcement functions;
- the necessary interaction among government bodies, industry and the public;
- how to establish priorities and evaluate success; and
- how to phase-in functions as resources become available.

The second module focuses on permits and provides answers to such questions as:

- what is an environmental permit, its role, its content;
- who should be required to have a permit, who should issue it and what criteria should it be based upon;
- how to make the permit enforceable and what to do when laws or regulations are imprecise; and
- what to do when resources are limited and how to introduce integrated permits.

How to monitor compliance and enforce compliance is covered in the third module. Three sections focus on industry self-monitoring, government inspections and enforcement, covering issues such as:

- who should be required to self-monitor what, how and when;
- how to adopt an integrated approach to self-monitoring;
- how to develop an inspection strategy and what guidance to provide to inspectors;

- how to convert to integrated inspections;
- how to develop an enforcement strategy with appropriate responses to different violations; and
- what options exist when resources are limited.

The fourth module deals with human and financial resources and examines:

- the types of resources needed for different functions; and
- the funding options.

The appendices include:

- a case study of a fictitious country providing a discussion of common problems governments encounter in each of these four areas; and
- a summary of the key points of each module in a form which can be easily photocopied onto overheads.

The training manual can be used for individual study or for group training in local, regional, national or international settings. It complements the earlier UNEP IE publication on *From Regulations to Industry Compliance: Building Institutional Capabilities* which prompted worldwide interest and requests for assistance to put its principles into practice. The training manual was successfully piloted to run the training program in China for governments of rapidly industrializing Asian countries.

The training manual is now available from UNEP IE. Requests for UNEP IE assistance in carrying out the training programs may also be considered.

In November 1994 in Beijing and Behai, China, UNEP held a Training Workshop on *Industrial Compliance with Environmental Standards for Countries in Asia with Rapidly Advancing Economies*. This workshop covered the functions of a compliance and enforcement program, financial and human resource needs, inspections, permits, compliance monitoring and enforcement response. The target group was government officials dealing with industrial compliance and related subjects in China, India, Malaysia, Singapore, Indonesia, Thailand, Pakistan and the Republic of Korea. At end of workshop participants developed a compliance program implementation plan for their country.

#### **4 OBSERVATIONS ON CAPACITY BUILDING**

Five observations about capacity building: First, capacity building should enhance compliance with environmental laws and standards. Capacity building should be viewed as complimentary to efforts aimed at environmental enforcement and not substitutes for them. Capacity building can furnish technical and managerial assistance, provide forums for consensus building and help develop institutions within government and industry to improve voluntary compliance with environmental standards.

Second, capacity building should encourage cleaner production and other preventive approaches as the strategies of choice for dealing with environmental problems. The traditional approach to environmental protection has been an end-of-pipe strategy that captures or removes pollutants after they are generated, or cleans up contamination after it has occurred. A cleaner production or preventive strategy is different, it means not creating pollution in the first place. This can be accomplished by substituting less toxic materials in product designs, recycling within

industrial processes or increasing process efficiencies, and extending product lifetimes. Cleaner production usually entails cost savings in terms of reductions in waste treatment and disposal costs, reduced liability for environmental damages, lower raw material costs and process efficiencies.

Third, capacity building should support public information and environmental education. Capacity building can improve information flow to stakeholders and decision makers and educate the public on the nature of environmental problems and what can be done about them. Partnerships can involve research into the social and economic aspects of environmental protection to better understand and design economic incentives and information and education programs.

Fourth, capacity building should encourage technology transfer and technical assistance both on a domestic and international basis. The results of environmental research and development must be transferred into the field as new and improved technological and management systems are developed. Outreach efforts to apply the results of research are essential. This is especially true on an international basis. Technology transfer to countries with developing economies is especially important.

Fifth, capacity building should provide for better integration of environmental policy with other policies. Other national and international policies can have as strong or stronger influence on environmental protection as can environmental policies. Consider the effect of energy policy on the types of fuels used, transportation policy on the vehicle mix and modes of transportation, and agricultural policy on fertilizer and pesticide use. The environmental effect of these policies need to be assessed in national and international forums. Approaches that reconcile environmental and other objectives need to be explored.

To deal with the increasingly complex environmental challenges of the future new tools and broader based strategies will be necessary. UNEP IE looks forward to new partnerships that recognize the needs and capacities of different groups and bring together the necessary resources for continuous improvement in environmental protection and sustainable development.

## UNEP'S ROLE IN CAPACITY BUILDING IN ENVIRONMENTAL LAW

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### 1 INTRODUCTION

Endogenous and genuine capacity building for sustainable development elaborated by the United Nations Conference on Environment and Development in Agenda 21 demands a concerted and coherent approach linking a number of components and based upon systematic analysis. Genuine capacity building requires a systemic analysis which links several components. Among them are; establishment of environmental institutions and machinery; the development of policies and strategies; the preparation and enforcement of laws and regulations; the development and use of economic instruments and market-based incentives; mechanisms for gathering, assimilating and dissemination of information; training of human resources in relevant technical disciplines; the development of new analytical tools, such as, national environmental profiles, impact assessment, environmental accounting, environmental audits, environmental indicators, environmental education, community involvement, technology development and transfer, and financing.

The essence of UNEP's response to these challenges in the area of capacity building lies in a shift of focus from pollution control and environmental management to the broader area of sustainable development and the more concerted, coherent and consistent approach it has adopted, in partnership with relevant UN and other agencies, with emphasis on regional delivery. Environmental Law - both international and national - constitutes just one of these components of capacity building in this new context. By itself, even the best legal regime can not do much to advance the pursuit of sustainable development goals. However, as Agenda 21 points out, laws and regulations suited to country-specific conditions could be among the most important instruments for transforming environment and development policies into action if they are used - in conjunction with the requisite human and other resource capabilities. They include capacities for the development and application of appropriate policies, strategies and activities to achieve a clean environment, natural resource security and integration of environment and development.

#### 1.1 Activities to realize sustainable development

Capacity building in environmental law encompasses three distinct but closely interrelated areas of activity crucial to the realization of sustainable development. They are:

- The development of national policies and strategies for pursuing the goals of sustainable development upon which national legislative and institutional regimes must be based;
- Formulation, enactment, implementation and enforcement of country-specific national legislation and institutions for environmental management for sustainable development; and,

- Active participation of States in the negotiation and adoption of international legal instruments on sustainable development, and their effective implementation.

### 1.2 Need for adequate environmental laws in developing countries

Agenda 21 echoes the concerns expressed in several national reports to the United Nations Conference on Environment and Development, that the inadequacy and ineffectiveness of existing national environmental law is a major hindrance to effective environmental management for sustainable development. Agenda 21 also emphasizes the essential importance of the participation in, and the contribution by all countries, including the developing countries, to treaty making in the field of international law on sustainable development. It states, in Chapter 39, that many of the existing international legal instruments and agreements in the field of environment, have been developed without adequate participation and contribution of developing countries, and calls for provision of technical and/or financial assistance to enable these countries to effectively participate in the international law making process. It calls for developing countries to be given "headstart" support not only in their national efforts to implement international agreements or instruments, but also to participate effectively in the negotiation of new or revised agreements or instruments, and in the actual international operation of such agreements or instruments. Such support should include assistance in building up expertise in international law, particularly in relation to sustainable development, and in ensuring access to the necessary reference information and scientific/technical expertise.

The legal and institutional capacities to cope with the challenging tasks of achieving a cleaner environment, natural resource security and the integration of environment and development are often either lacking, or weak and inadequate in many developing countries. Further, the legislative and institutional mechanisms for the implementation of global and regional environmental conventions are all too often nonexistent or inadequate such agreements being implemented, generally, through administrative directives. Full and effective participation in treaty making processes is often hampered by inadequate information and perhaps also by inadequate consultations among relevant national institutions and interest groups.

### 1.3 Need for implementation and enforcement

Where governments have succeeded in developing environmental legislation and institutions which incorporate some modern concepts of conservation and natural resource management, these often remain unimplemented or inadequately implemented for several reasons. Principal among these are, the piecemeal formulation of legislation without adequate consultation among all relevant national institutions and interest groups to forge national consensus on the policies upon which to base such legislation, including, interrelationships among national, state, provincial and local institutions involved in the implementation of such legislation; lack of essential material resources, equipment and trained personnel; and inability to mobilize sufficient public interest and participation.

Environmental legislation is among the most pervasive elements of cross-sectorial importance in environmental management for sustainable development. Environment touches upon most sectors of development related activity, for instance water management, soil protection, agriculture development, livestock management, mineral activity, transport, energy generation and distribution, industrial development, forestry, fisheries, wildlife utilization, tourism, management of human settlements etc. In addition to having an important contribution in each of these individual sectors and in their interrelationships and integration, the development and implementation of

sound and effective environmental law may involve interaction with legislation and administrative practices and institutions even beyond these sectors. For example, it may be necessary in this process to coordinate the provisions, or the application, of environmental norms with the legal regimes dealing with property rights, land tenure, taxation, local government, customary institutions and practices, and with administrative practices in the areas of national planning, fiscal policy development, natural resource accounting etc.

Thus, a sound and implementable legislative and institutional regime at the national plane which is country-specific is indispensable for effective environmental management for sustainable development. It is particularly important not only to ensure that the network of environmental legislation and related institutions are substantively adequate and implementable, but also that the implementing agency/agencies have the capacity in terms of human and material resources to carry out their functions effectively. Laws which are not properly implemented simply serve to weaken the compliance morality of the population and undermine governmental policies and achievements in the environment and development field. Further, the full participation of all States in the development of international legal instruments, including global and regional conventions in the field of sustainable development, is essential for achieving wider adherence to, and efficient implementation of, such legal instruments.

Environmental law undergirds and guarantees actions taken by governments and aid donors to help achieve a cleaner environment, natural resource security, and the integration of environment and development. Giving legal backing to these policies and programs, provides those engaged in them with justification, stimulation and even protection since the agency or ministry concerned can have recourse to the law as a mandate for resource mobilization and action. It also provides a sound basis for implementation and enforcement of national policies. The relevant institutions can also serve a catalytic function, energizing governmental, administrative and public involvement in environmental management for sustainable development.

#### 1.4 Capacity building for developing countries and those in transition

Clearly, there is a need for a coordinated, cohesive, structured and sustained capacity building program to assist developing countries and countries with economies in transition to develop and effectively implement legal and institutional responses at both international and national levels to the new challenges for achieving environmental management for sustainable development. Having regard to the fact that the effect of having laws which are not implemented could be even worse than having no laws at all, it is essential that programs for the development of national legislative and institutional regimes culminate in galvanizing international cooperation for the mobilization of the requisite human, material and other resources to augment national efforts to realize effective implementation.

Following the mandate it received from the United Nations General Assembly Resolution 3436 (XXX) to "... take measures designed to provide technical assistance to developing countries, at their request, for the development of their national environmental legislation .", reiterated at successive sessions of its Governing Council, UNEP has provided assistance to some seventy five or more developing countries, at their request, to develop national environmental legislation and related institutions. Such assistance includes review of existing national legislation and related institutions, drafting of general and sectorial environmental legislation and/or elements for use in drafting legislation, preparation of legal components of national environmental and conservation strategies and legal advice on appropriate legislation and institutions for environmental management. Having regard to the comparative advantage it has in this field, Agenda 21 has identified as some of the priority areas on which UNEP should concentrate: the... *provision of*

*technical, legal and institutional advice to governments, upon request, in establishing and enhancing their national legal and institutional framework, in particular, in cooperation with UNDP Capacity Building efforts ....”*

The wealth of experience and expertise that has been gathered over a period of some twenty years has firmly established UNEP as an acknowledged leader in the area of capacity building in environmental law. This was recognized in Agenda 21 (Chapter 38.22) which listed this activity as one of the priority areas on which UNEP should concentrate. The same has recently been echoed in the Secretary-General's Report on the In-depth Evaluation of UNEP's Program, endorsed by the Committee for Program Coordination, which listed capacity building in environmental law as one of two areas of capacity building on which UNEP should focus (Recommendation 14). A practical demonstration of this recognition is the lead role given to UNEP in the design and implementation of the Government of the Netherlands funded UNEP/ UNDP Joint Project in Environmental Law in Africa in partnership with the World Bank, IUCN and FAO<sup>2</sup>. Maintaining and further strengthening this leadership role is the principal responsibility of UNEP's Environmental Law and Institutions Program Activity Center (ELI/PAC).

Assistance in the development of relevant sectorial legislation has also been rendered by several UN agencies such as FAO, WHO, UNESCO, etc. International organizations such as IUCN have also made a significant contribution in the development of national environmental legislation in several developing countries. The World Bank and Regional Development Banks have also assisted in development of sectorial legislation related to their loan agreements.

## **2 ESSENTIAL CAPACITY REQUIREMENTS IN ENVIRONMENTAL LAW**

### **2.1 Goals and objectives**

The aim of capacity building in environmental law and institutions is to develop as appropriate, human and material resource capabilities of countries, particularly developing countries and countries with economies in transition, to achieve the following goals:

- To secure, in the light of their respective country-specific conditions, the development of national policies and strategies for environment and development, and facilitate their integration through appropriate legal and regulatory policies, instruments and enforcement mechanisms at national, State, provincial and local levels;
- To secure the effective implementation and enforcement of international and national legal and institutional regimes in the field of sustainable development; and
- To secure the effective participation of these countries in the negotiation of new international legal instruments in the field of sustainable development and the review, and where necessary, revision of existing instruments, their international operation and effective implementation at national levels.

### **2.2 Fundamental considerations in UNEP's capacity building programs**

- Capacity building in environmental law must be integrated within the larger framework of capacity building for sustainable development.

- The programs must be appropriately designed and executed with a view to inspiring a greater interest in and commitment towards the use of environmental law as an instrument for translating sustainable development policies into action and enabling national institutions and individuals to take appropriate initiatives, on a well informed basis, towards this end. They must be appropriately focused on the requirements of each target group, be result-oriented and be pursued on a sustained basis until results are achieved. Investments in capacity building have failed too often due to the absence of follow-up action.
- Capacity building should be directed at countries that demonstrate a serious and sustained commitment to pursuing the goals of environmental management for sustainable development, having regard to their respective absorptive capacities. Preference should be given to the Least Developed Countries and to those in which UN agencies and bodies and other international organizations have major activities on environment and development in general, and in capacity building in particular. Such programs should be carried out in languages which promote effective communication.
- Interagency cooperation and collaboration in the design and implementation of capacity building is emphasized in Agenda 21 with a view to avoiding duplication, enhancing effectiveness and promoting a holistic, cohesive and integrated approach to capacity building for sustainable development applying the best available expertise. Such collaboration is crucial to the success of capacity building in environmental law and institutions.
- An essential component of the strategy for capacity building, particularly in the legal and institutional field, is the central role to be assigned to national experts in these areas to steer the whole process. It is they who are the best judges of national needs and possible options for action as seen within their own particular national milieu. In addition, the full participation of national experts invests in them the authorship in the final product, which helps advance the implementation process. It also provides them with the much needed exposure and experience required to deal with national sustainable development issues with greater confidence and facility. External expertise, wherever possible from the region, should be used to support what is essentially a national undertaking.

### 2.3 Essential Capacity Building Requirements in the Area of National Legislation and Institutions

- Capacity to effectively integrate environment and development in policies and practices of each country. Towards this end, to promote consultative processes which leads to the forging of consensus on national policies and institutional regimes upon which national legislation is to be based.
- To review existing legal and institutional mechanisms, established, in most cases, long before the urgency for taking measures to achieve sustainable development became imperative, with a view to restructuring such regimes to promote the realization of the goals of sustainable development.

- To promote the development of appropriate, country-specific, legal and regulatory policies, legislation and enforcement mechanisms for the integration of environment and development, at national, state, provincial and local levels.
- Having regard to the need for countries to develop their own priorities, in accordance with their specific needs, to disseminate information and practices of States in the field of environment and development, including appropriate instruments and compliance incentives, with a view to encouraging their adaptation and use, as appropriate, at national, state, provincial and local levels through national training programs and other means.
- To disseminate information on judicial decisions touching upon legal and institutional aspects of sustainable development to judicial officers, with a view to advancing the frontiers of environmental law for sustainable development through judicial interpretation and decisions.

#### 2.4 Essential Capacity Building Requirements in the Area of International Legal Instruments

- Dissemination of information on scientific, technical, legal, institutional and other developments which constitute a backdrop to the development of international legal regimes for sustainable development.
- Promotion of national consultative processes leading to the examination of relevant issues from a wider national perspective, paying due regard to regional and global perspectives, and consequently, developing relevant national policies on a more informed basis.
- Assistance to participate in international negotiating processes of new or revised agreements or instruments.
- Assistance to implement international legal regimes, including development of appropriate legal, administrative and institutional mechanisms.
- Assistance to build up expertise in international law, particularly in relation to the broad range of legal and institutional issues connected with sustainable development, through appropriate training and education programs, as well as, dissemination of necessary reference information and provision of access to scientific and technical expertise.

#### 2.5 Target Groups

To achieve the aims and objectives of capacity building in environmental law and to integrate it within the larger framework of endogenous capacity building for sustainable development, programs must be appropriately designed to respond to the specific requirements of the following target groups.

- Policy-makers, decision-makers and senior government officers, whether at the national or local level, responsible for the formulation of environmental and development policies requiring the assessment of the need for, and scope of, legislation and related institutions, and also, national positions for the development of international legal instruments.

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- Legal officers and legal draftsmen with responsibility for the preparation of draft legislation in the field of environment and development, who would receive technical advice and professional enhancement support.
  - Authorities and agencies and their individual staff members, that have responsibility for administering, implementing and enforcing laws relating to environmental protection, natural resource management and integration of environment and development, who will benefit from training, information networking and professional enhancement services.
  - Grassroots organizations especially those representing local communities, women and youth, in addition to being stimulated to play a more active and fuller role in environmental management, decision making, and the development, implementation and enforcement of environmental law at the local level, could also provide an important source of traditional knowledge relating to environmental management for sustainable development.
  - Non-governmental organizations active in regard to the development and implementation of policy, legal and institutional aspects of environment and development. Their effective participation in the decision-making process and in environmental management tasks generally should be encouraged. The media should also be encouraged to play its role effectively to stimulate the development and effective implementation of environmental law.
  - The private sector, especially with regard to industrial compliance, should also be encouraged to take a leadership role in community activities aimed at achieving the objectives of sustainable development.
  - Universities and other institutions specializing in environment and development studies which have programs in environmental law and management should be further strengthened and in regard to the teaching of these subjects and their active engagement in offering assistance and training to national environmental institutions.
  - Developments in the field of environmental law especially those attributable to judicial interpretation and decisions should be made accessible to members of judicial bodies with a view to promoting the harmonization of environmental law through the application of the doctrine of precedent in judicial interpretation and decisions.

### **3 NEW APPROACHES TO CAPACITY BUILDING IN ENVIRONMENTAL LAW**

The Post-UNCED context demands a heightened role for UNEP as the leading instrument of the international community to raise the world's conscience regarding actions that are creating negative environmental impacts and to catalyze the development and implementation of policy options to respond to urgent environmental issues, in the context of sustainable development. Capacity building to enable nations to pursue sustainable development paths is central to UNEP's mandate. It constitutes a linchpin of its restructured program, "UNEP: The New Way Forward", which is designed to respond to the new challenges of UNCED. The principal strategic elements of this new program are an integrated and coordinated approach, needs-responsive and result-oriented program design, partnership with UN and other agencies, and regional delivery.

Against this background UNEP's new strategies for capacity building in environmental law underscore the following fundamentals:

- Integration of capacity building in the legal and institutional field within the larger framework of endogenous capacity building for sustainable development as elaborated in Agenda 21 and towards that end, to harmonize ELI/PAC's capacity building activities in a multi-program approach with those of UNEP's other divisions, units and regional offices;
- Partnership with the secretariats of major environmental conventions, as well as other UN bodies, agencies and intergovernmental and non-governmental organizations active in the area of environmental law and institutions so as to ensure cohesion, complementarity and continuity of the program, avoid duplication of efforts and resources, and heighten effectiveness;
- Design and implement programs in partnership with national/regional experts, which respond to the specific requirements of each country/region, taking full account of their respective absorptive capacities and towards that end to fully engage the specialized knowledge of UNEP's regional offices regarding the needs and requirements of countries in each region in both the design and delivery of such programs; and
- Investing in national experts the full responsibility for developing and steering the process of legal and institutional development through national consultative and participatory processes, with UNEP in partnership with other agencies, facilitating their work through the provision of technical advice, and a range of legal information and material.

Within these key parameters, UNEP's capacity building activities in environmental law had been directed at the following:

- Identifying the existing gaps and shortcomings in domestic environmental law, its implementation and enforcement and in the related institutional structures, taking careful account of the work which has been undertaken in this respect by the governments and other international agencies, and the capacity of each country to develop and effectively implement country-specific legal and institutional regimes for environmental management for sustainable development;
- The provision of assistance for the formulation, enactment and enforcement of national environmental legislation and the establishment or enhancement of related institutional structures for effective environmental management to achieve sustainable development, covering general, cross-sectorial and sectorial issues and, including the implementation of international environmental agreements;
- The facilitation of advice and through interagency collaboration - in particular with UNDP's Capacity 21 and the World Bank's National Environmental Action Plans, - assistance required by the governments to effectively and efficiently implement the legislative and institutional regimes, including provision of equipment and other material resources required for carrying out effective environmental management, within the framework of the legal and institutional regime;

- Providing legal training and other human resource development programs in the field of environmental law and institutions, to enable the authorities and individuals dealing with these matters to discharge their functions with greater effectiveness and efficiency;
- Providing a network of information and resources to assist in the development and implementation of environmental legislation and related institutions including the development, adoption and application of environmental standards; and
- Enhancing the capacity to participate effectively in the negotiation, development and implementation of international environmental agreements.

## **4 UNEP'S ACTIVITIES IN CAPACITY BUILDING IN ENVIRONMENTAL LAW**

### **4.1 National Legislation**

UNEP has substantially restructured its assistance program to focus on sustainable development issues, as against pollution control and environmental management, which was the principal focus of its pre-UNCED program. In addition, these activities are linked to bilateral and multilateral cooperation programs, such as the World Bank's National Environmental Action Plans in order to maximize synergies and ensure an integrated and systemic response to countries' needs. New areas being addressed in the development of national legislative and institutional regimes include, institutional mechanisms for integration of environment and development in decision making at national, state and provincial and local levels, economic instruments for promoting sustainable development, such as, Environmental Impact Assessment and green audits, industrial compliance and enforcement, public participation, including, citizens' suits, and innovative funding and dispute avoidance and settlement measures.

The previous practice of relying on foreign consultants to develop national laws has been replaced by investing the responsibility for this work on a representative Task Force of national experts. It is they who, through participatory and consultative processes, develop the necessary national legislative and institutional mechanisms in the context of the particular circumstances and administrative practices of their respective countries. Technical assistance, legal material and information is provided to the Task Force, as may be required, by ELI/PAC staff in collaboration with the partner agencies. Such programs have been carried out in more than twenty-five countries, at their request, during the three years since UNCED. These include: in Africa - Burundi, Central African Republic, Chad, The Gambia, Ghana, Kenya, Lesotho, Malawi, Nigeria, Sao Tome and Principe, Mozambique, Sierra Leone, Sudan, Tanzania and Zambia; in Latin America and the Caribbean - Barbados, Bolivia, Chile, Trinidad and Tobago; and, in West Asia and Asia and Pacific regions - Cambodia, Jordan, Kiribati, Lebanon, Oman, The Philippines and Sri Lanka.

### **4.2 Human Resource Development**

The strengthening of human and material resource capabilities of countries, especially developing countries and countries with economies in transition to develop and effectively implement environmental law at international and national levels in the new context of sustainable development is the avowed aim of UNEP's programs in this field. Activities in this area since UNCED include two Global Training Programs and four regional training programs. Two regional training programs and one at national level are planned for later this year. Several innovative

measures have been included in the post-UNCED period to make these programs more focused and result-oriented. The regional and national programs, in particular, are focused on specific aspects of law of special relevance to them, such as, the workshop held in China on Industrial Compliance for countries in Asia with rapidly advancing economies, and those held in Western Samoa and Bahrain which focused on national environmental legislation of the Pacific Island States and West Asia, respectively. In designing each program, basic prerequisites are ensured, i.e. adequate advance preparation of participants, appropriate teaching methodologies and focused and sustained follow-up action. Some innovative mechanisms have been introduced. Environmental problems and issues of concern to the participants are received in advance of the Program, which enables Resource Persons to focus on real issues, promote vibrant interaction and enhance the usefulness of the programs to the participants. Participatory and experiential teaching methodologies are applied having regard to the high level of participation that these programs attract. Follow-up programs are designed for each participant based on continuing support for accomplishing "special assignments" and for responding to their legal information/material requirements. Arrangements have also been made with UN agencies and bodies and other international organizations to provide necessary assistance to the trainees. A training-by-attachment program which provides a 4-6 week exposure to selected senior officials of developing countries and countries with economies in transition at UNEP's Legal Offices, Convention Secretariats and other UN agencies and bodies began in 1992. Eight participants from Egypt, Barbados, Fiji, Jordan, Malawi, Cuba, Mozambique, and Burundi have benefited from this program so far. With a view to strengthening the teaching of environmental law at universities, this program is being expanded to include University professors, who will be attached to Law Faculties of other Universities in their respective regions which have well developed teaching programs in Environmental Law.

The principal objective of the legal information and publications program is enhancing the information and knowledge base of those working in the field of environmental law in government, universities and other institutions, and the public generally, especially in developing countries and countries with economies in transition. It also provides an essential support service to UNEP staff, particularly those working in the legal and institutional field. Among the information tools of particular relevance developed since UNCED, are the Computerized Environmental Law Information Base (CELIB), which contains legal information collected by UNEP over a period of over twenty years in both international and national environmental law; the texts of over 200 International Environmental Conventions and Agreements, as well as the Register of Environmental Treaties. Two indexed compendia of national framework legislation and E.I.A. legislation have been compiled and a biannual bulletin serves to inform those interested in environmental law worldwide of UNEP's activities in this field. Collaboration with Convention Secretariats in the development and dissemination of information, and with other organizations, particularly IUCN, with a view to enhancing efficiency and avoiding duplication, constitute a cornerstone of this program.

## **5 PARTNERSHIP**

Since UNCED, UNEP's Environmental Law Program has pursued collaborative partnerships not only with governments but with several UN agencies and bodies and international organizations, universities and professional bodies. The aim of such partnership is to draw on the experience of various UN and other organizations to mutually reinforce the effectiveness of the respective programs, to build upon the work already carried out by various agencies, and to avoid wasteful duplication. The UNEP/UNDP Joint Project on Environmental Law in Africa,

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funded by the Government of The Netherlands and implemented in collaboration with the World Bank, FAO, WHO and IUCN described elsewhere in this publication was the first major joint undertaking in this field and has paved the way for closer collaboration with these and other organizations in several other legal activities as well. This was followed by the signing of an Agreement for Cooperation in the Field of Environmental Law between UNEP and IUCN, which provides a framework for cooperation between the two organizations in several areas including development of international environmental law, legal training, and dissemination of legal information. Partnerships have also been forged with The United Nations Institute for Training and Research (UNITAR) and The United Nations Commission on Human Settlements (Habitat) which have collaborated in the design and conduct of two major Global Training Programs in Environmental Law attracting participants from over 50 developing countries and countries with economies in transition. Over 450 applications were received for participation in these two Global Training Programs. UNEP is working in partnership with IUCN, the University of Singapore, The United Nations University (UNU) and ESCAP to develop and carry out regional capacity building programs at The Asia-Pacific Center for Environmental Law established at the University of Singapore. UNU's expertise is also being drawn into UNEP's initiatives to develop environmental law curricula and strengthen the teaching of environmental law in Universities particularly of developing countries. The two organizations regularly provide resource persons for each others' training programs in the field of environmental law, thereby, contributing to creating a judicious balance between the academic and practical aspects of environmental law in the training programs.

In its program for the development of international environmental law, UNEP is working closely with several recognized institutions active in the field, such as, the Foundation for International Environmental Law and Development (FIELD), the Center for International Environmental Law (CIEL), and the Environmental Law Center at the Georgetown University in Washington DC. A workshop on Implementation and Compliance was convened in collaboration with FIELD early in 1995, and two workshops on the Development of International Law in the direction of Sustainable Development were convened jointly with CIEL and the Georgetown University Law Center later in the year. Relations with National Law Institutes are also being strengthened through joint sponsorship of mutual programs, as for example, the sponsorship of the Indian Law Institute's International Symposium on Environmental Law.

#### FOOTNOTES

1. Document No. E/AC.51/1995/3
2. See Partnership in Action: UNEP/UNDP Joint Project on Environmental Law in Africa, in this volume.



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## **INTERNATIONAL CAPACITY BUILDING FOR ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT**

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### **SUMMARY**

A summary of UNDP's primary objectives, modes of operation and forms of support for building capacity in environmental enforcement and compliance is provided.

## **1 THE UNITED NATIONS DEVELOPMENT PROGRAM**

### **1.1 General description of the organization**

The United Nations Development Program (UNDP) is the United Nations largest provider of grant funding for development, and the main body for coordinating UN development assistance. UNDP's purpose is to help developing countries, and countries moving from centrally planned to market economies, build capacities for "sustainable human development" - development that center's on people.

UNDP has three overriding goals:

- To help the United nations become a powerful and cohesive force for sustainable human development.
- to focus its own resources on a series of objectives central to sustainable human development, namely: poverty elimination; creation of jobs and sustainable livelihoods; advancement of women; and, protection and regeneration of the environment.
- To strengthen international cooperation for sustainable human development and serve as a major substantive resource on how to achieve it.

Within the framework of sustainable human development, UNDP's Executive Board has recognized "poverty elimination" as the overriding priority in UNDP programs. It has also decided that countries with annual per capita incomes of US \$750 or less should receive 88 per cent of UNDP's core resources.

### **1.2 Universality**

UNDP derives its core resources, totaling about \$1 billion a year, from the annual voluntary contributions of governments that are members of the United Nations or its agencies. All major policy decisions and financial allocations are determined by a 36-member Executive Board, whose members are from both contributor and program countries.

### 1.3 Global reach

With 136 offices worldwide, UNDP has the largest on-the-scene representation of any development assistance organization. Through these offices it supports the development efforts of 175 countries and territories, working with governments, organizations of civil society, and the people who benefit from its support. Eighty-five per cent of UNDP's staff members serve in country offices and 15 per cent at its Headquarters in New York.

This extensive network also enables UNDP to facilitate the cooperation for development provided by the UN system as a whole. The Resident representatives that head UNDP offices are usually also Resident Coordinators of UN operational activities for development and represent many UN organizations. Their duties include administering special-purpose funds such as the UN Capital Development Fund (UNCDF); the United Nations Volunteers (UNV); and the UN Development Fund for Women (UNIFEM).

When disasters or emergencies occur, Resident Coordinators play an important role in coordinating relief efforts, in cooperation with the UN Under-Secretary-General for Humanitarian Affairs and other UN agencies. In addition, the resident coordinator is expected to take the lead in mobilizing international assistance for rehabilitation in countries that are recovering from major disasters and emergencies.

### 1.4 Access to worldwide expertise

To execute the programs and projects it supports, UNDP draws upon developing countries' own national technical capacities, as well as the expertise of over 30 international and regional agencies, academic and research institutions and many non-governmental organizations. This enables it to deliver the exact type of specialized assistance required. It also ensures the effectiveness of UNDP's global and interregional programs which address worldwide concerns such as food security, safe motherhood, tropical disease control and HIV and AIDS.

### 1.5 Catalytic role

Over and above its core funding, UNDP helps to mobilize additional financial support for governments' priority programs. Contributions of some \$900 million yearly are provided for UNDP administered special purpose and trust funds, and for particular programs through "cost sharing" contributions from both donor and program countries.

In addition, UNDP support activities stimulate some \$9 billion a year in collaborative funding from public and private sources.

### 1.6 Program activities

UNDP works both "upstream," giving governments essential policy advice, and "downstream," providing funds for activities with short term tangible benefits. Support is provided to:

- Build governments' capacities to manage development. Areas of assistance include public sector reform; aid coordination; economic management and market reform; democratization (encompassing electoral processes, human rights protection and establishment of independent judiciaries); and improving cooperation with organizations of civil society.

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- Help countries develop operational frameworks for sustainable human development, for example, by defining development goals, linking global themes and resources to national priorities and identifying external financing and technology needs.
  - Assist governments in identifying, designing and implementing long-term development programs, including strategies and plans which respond to national development objectives.
  - Help countries mobilize additional financial resources needed for their development activities - from domestic sources, or from multilateral lending institutions such as the World Bank and regional development banks.
  - Promote access to and adaptation of scientific knowledge and suitable technologies.
  - Further Technical cooperation Among Developing Countries, whereby countries work together for development or match needs and capacities for their mutual benefit.
  - Strengthen capacities in civil society for participatory grassroots development that empowers people and their non-governmental and community based organizations.
  - Directly finance projects that validate policy ideas, demonstrate grassroots success or launch promising innovative activities.
  - Help forge North-South partnerships and secure international agreements on global issues, such as desertification control and climate change.
  - Contribute to peace building and conflict prevention through support for national and regional reconciliation, reintegration of returning refugees and displaced people, reconstruction of war-torn communities and the training of demobilized soldiers for remunerative employment.

#### 1.7 Programming tools

UNDP work includes the preparation of several program and project documents, some of which are prepared every 3-5 years and others which are prepared on an as required basis. These major documents, by their generic name, include a Country Strategy Note, Program Note, Cooperation Framework and specific thematic programs and projects.

## 2 CAPACITY BUILDING

The breadth of the topic of capacity development, much like that of sustainable development, encompasses a wide range of aspects including the human, technological, organizational, financial, scientific, cultural and institutional. It does not lend itself to clear definitions or a consensus on its meaning. Indeed, most discussions on the topic quickly tend to broaden out to deal with the overall process of development. It therefore may be useful to restate the definition in Agenda 21, i.e., that capacity building is *the process and means through which national governments and local communities develop the necessary skills and expertise to manage their environment and natural resources in a sustainable manner within their daily activities*. The main ideas, according to UNDP, behind this concept are the following:

- strengthening peoples' capacity to achieve sustainable livelihoods;
- a cross-sectorial multi-disciplinary approach to planning and implementation;
- an emphasis on organizational and technological change and innovation;
- an emphasis on the need to build social capital (i.e. voluntary forms of social regulation) through experimentation and learning; and
- an emphasis on developing skill and performance of both individuals and institutions.

To assist in the field of capacity building, UNDP gives attention to the enabling environment or the broader context of capacity building programs — political, social, cultural, legal, institutional — and ways in which key stakeholders can support or prevent progress. In other words, capacity building for UNDP is defined in its broadest sense and is not limited to training and education activities.

In the context of UNCED, UNDP was given the responsibility to task-manager on capacity building for Agenda 21.

### **3 TECHNICAL SUPPORT FOR CAPACITY BUILDING IN ENVIRONMENT**

#### **3.1 Sustainable energy and environment division (SEED)**

##### **3.1.1 General description**

An important element in turning UNDP's sustainable human development mandate into reality is SEED — the Sustainable Energy and Environment Division. Established in 1994, SEED consolidates UNDP's wide range of energy, natural resources management and environmental support activities into one division. By bringing this wealth of substantive expertise into a coherent whole for the first time, SEED enhances UNDP's technical capacity, competence and responsiveness to country demand. This innovative consolidation provides UNDP - and its partners in government and civil society - with new possibilities for improving the effectiveness of global and national policies and programs related to energy, the atmosphere, agriculture, forests, waters, land biodiversity and other natural resources, and environmental management as a whole.

##### **3.1.2 Integrating environment and development**

SEED's primary objective is to support the integration of environmental protection and management with other aspects of UNDP's development program. In addition, SEED seeks to maximize the effectiveness of UN operational activities and strengthen international cooperation in support of strategies, policies and programs focused on the essential linkage of environment and development. It works towards these goals through UNDP's country offices and regional bureaux at headquarters by providing support in the following areas:

- Helping to incorporate environmental concerns at the earliest possible stages of national planning and economic decision making.
- Helping to design and implement projects and programs to promote sustainable energy, encourage sustainable management and use of natural resources, protect biodiversity and combat desertification and land degradation.

- Disseminating knowledge, training, tools and technologies to build capacity in both government and civil society to help achieve the goals of Agenda 21.

### 3.1.3 Divisional structure, synergy and collaboration

Five operational units, each with its own program responsibility and areas of technical expertise, comprise SEED. While the units actively make inputs into one another's programs - and increasingly collaborate operationally - they continue to maintain their own distinctive nature and focus. SEED represents an innovation through synergy and diversity, rather than uniformity.

The five existing SEED units, based in New York, are: Energy and Atmosphere Programs; Natural Resources Management; The Global Environment Facility; UNSO-Office to Combat Desertification and Drought; and, Capacity 21.

### 3.1.4 SEED supported activities related to compliance and enforcement

#### a) Capacity 21

While each of the units has a particular segment of environmental compliance and enforcement which it could support, the primary unit responsible for this topic is Capacity 21.

Capacity 21 was launched at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992. The program is a novel and catalytic initiative that supports developing countries in building their capacity to integrate the principles of Agenda 21 - the plan of action for sustainable development endorsed by more than 180 countries - into national development.

Capacity 21 pursues three main objectives: assisting countries to incorporate the principles of sustainable development into their development plans and programs; assisting countries to involve all stakeholders in development planning and management; and creating a body of experience and expertise in sustainable development and capacity building that will be of continued material value to developing countries, UNDP, UN specialized agencies, NGOs, donors and others. At the end of its second year of operation, Capacity 21 had on-going programs in more than 40 countries; additional activities are under development in 10 other countries.

One of the more relevant, yet unique, examples of Capacity 21 support for compliance and enforcement is seen in the project RAF/93/013 Environmental Law and Capacity Building in Africa. The project involves 10-12 African countries and is managed through a cost sharing arrangement with the Government of the Netherlands, UNDP, UNEP and the IUCN. It addresses the following needs:

- Strengthen the capacities and capabilities of participating Government institutions with a view to facilitating a switch from vertical functioning attitudes, especially policy initiatives and decision-making to integrating multi-sectorial management approaches to environmental legislation, and enforcement for sustainable development;
- Institute a program for human resource development related to legislative and institutional strengthening, including training and dissemination of information;
- Create enabling environment through improvement/ revision of existing environmental and related institutional mechanisms with a view to promoting efficient, rational and sustainable utilization of natural resources.

In each of the targeted countries the project will develop country specific responses that:

- Provide a detailed needs assessment of legal and institutional regimes for sustainable environmental management both on a sector and cross sector basis.
- Assist in preparation of national legislation.
- Assist in implementing environmental legislation, including the putting in place of institutional structures which ensure that managerial functions at all levels are properly integrated and coordinated to provide an effective framework for environmental management, including inter-ministerial coordination and conflict resolutions.
- Provide institutional capacity building in the form of training, dissemination of information and exchange of experiences.
- Promote consensus building for environmental legislative reform processes.

Capacity 21 is a UNDP trust fund managed by SEED. In order to access these funds countries must make requests to their local UNDP offices which in turn forward the request to their respective geographic bureau at UNDP-HQ New York. A Capacity 21 Management Group meets occasionally to review requests for Capacity 21 funds submitted through the Regional Bureaus. Capacity 21 programs are traditionally broad in scope, rather than focusing on a single aspect of Agenda 21. Two examples of relevant Capacity 21 projects are attached herein as Annex 1. The criteria for obtaining Capacity 21 support through a UNDP country office includes those listed in the checklist in Annex 2.

#### b) Forest capacity program

The purpose of the Forestry Capacity Program (FCAP) is to support building capacity in developing countries to implement their National Forestry Programs. The focus of this Program is to design and implement policies that will encourage the various actors to make decisions which result in sustainable management of tropical forests for socio-economic development and environmental conservation.

As demand is expected to exceed the availability of resources, their allocation under the program will be guided by criteria which include:

- (a) degree of government commitment to the FCAP goals and objectives;
- (b) importance of the country's forest resources;
- (c) contribution of the sector to the national economy and the respective development potential;
- (d) severity of forest degradation and the number of people affected;
- (e) needs for conservation of biodiversity as well as soil and water resources;  
and
- (f) type and extent of FCAP assistance needed.

It is important to establish a participatory planning and implementation process, and a multi-disciplinary approach to forest issues. A variety of local institutional arrangements which bring together relevant ministries, international organizations, NGOs and CBOs may be appropriate to support such an approach. This project would provide assistance for supporting existing

institutional arrangements or setting up new ones where needed. Coordination of donor participation in NFPs requires further institutional capabilities which this program also aims to support.

The detailed design of a FCAP should be based on a comprehensive assessment of the national and local capabilities to initiate and undertake long term forestry planning and to implement programs and projects. The purpose of the program is to fulfill the essential technical and institutional conditions for forestry development planning, while simultaneously enabling the country to begin, or enhance, the FCAP process, particularly with regard to sectorial and project planning, consultative mechanisms, policy design and implementation, and monitoring and evaluation.

Given the above, the FCAP has the ability to deal with legislation, policy and regulations governing the forest sector. The projects supported through this special fund do not deal solely with compliance and enforcement, but includes these issues as part of overall forest sector management. Assistance through an FCAP project may entail drafting new legislation, writing regulations, implementing legislation, guidelines, codes of practices, and monitoring and enforcement thereof. For example, in the Cameroun, an FCAP project was mandated to provide the team responsible for writing the specific text for the application of the new forestry law and accompanying decrees. Similarly, the FCAP project in Bhutan has enabled the country to finalize text for a new Forest and Nature Conservation Act (1995), which has been approved by the Cabinet for submission to the National Assembly. The enforcement of many sections of the new Act will require the preparation of rules and regulations, which will be entrusted to a Task Force, also supported by the project.

Support for FCAPs can be obtained directly through the Natural Resources Management Unit of SEED.

#### **4 ADDITIONAL UNDP SUPPORT FOR CAPACITY BUILDING GENERALLY**

UNDP can support capacity building in environmental compliance and enforcement through its regular country level activities. Country programs are developed by countries in consultation with UNDP country offices. These activities are designed to provide support in the thematic areas listed under 1.1 above. Governmental and non-governmental organizations seeking assistance for support in capacity building for environmental compliance should therefore contact the resident representative in their country to discuss methods of obtaining support from the UNDP core allocation to the country.

In the past support has been provided for training, institution building, programs in governance and democratization processes, support for the creation of market based systems, grants for civil society activities and so forth. The spectrum is broad, and requirements and needs vary in each country.

#### **5 UNDP'S RECENT EXPERIENCE WITH REGULATIONS AND COMPLIANCE**

In 1992 UNDP issued the Handbook and Guidelines for Environmental Management and Sustainable Development. These guidelines were based on the rules and procedures of UNDP at the time, and had some resemblance to strategic environmental assessment criteria. A significant training program was launched after the guidelines were released, and over 120 country offices hosted the training course. Although the guidelines are considered relevant and necessary,

their implementation has been limited. Communication about the guidelines was abundant when they were distributed, yet the guidelines were issued without any compelling reasons for their utilization, either negative or positive. From this experience, UNDP is in the process of drafting a new policy on the implementation of the guidelines which will hopefully provide incentives and disincentives for the use of these protective measures.

## **6 CONCLUSIONS**

UNDP is committed to capacity building for sustainable human development. Indeed, using the broad definition of capacity development explained above, nearly all of UNDP's support falls within this category, and certainly it is UNDP's priority in topics related to Agenda 21. UNDP support is country driven - requests emanate from the countries, not from or through the organization's headquarters. New proposals stemming from government or civil society for support in areas related to capacity building for environmental compliance should accordingly be discussed with UNDP country offices directly.

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## ANNEX 1 UNDP CAPACITY 21 PROGRAM EXAMPLES

These are two of a series of summaries of Capacity 21 programs currently under implementation around the world. One is for Lebanon and one is for Honduras. Series documents and general program information are available through the UNDP Internet Gopher Server at gopher.undp.org. Please address any questions by e-mail to CAP21@undp.org or by mail to the Coordinator, Capacity 21, Sustainable Energy and Environment Division, United Nations Development Program, 1 United Nations Plaza, FF-10th Floor, New York, NY 10017, USA. Fax 1 (212) 906 6973.

### A. CAPACITY 21 PROGRAM SUMMARIES, NUMBER 3, LEBANON

**Program Title:** Establishment of an enabling environment for integrating the principles of sustainable development in Lebanon.

**Program Number:** LEB/93/G81

**Start Date:** September 1994

**Duration:** 2 years

**Executing Implementing Agency:** Government of Lebanon, Ministry of the Environment

**Cooperating Agencies:** UNEP and METAP

**Capacity 21 Contribution:** 550,000 US\$

**Cost Sharing:** 60,000 US\$, UNEP

42,675 US\$, IPF Subline

#### 1 IN BRIEF

After seventeen years of war, and the social and environmental turmoil associated with it, the Government of Lebanon faces the extraordinary task of planning, financing and executing a comprehensive reconstruction of the country's infrastructure. The Government has also chosen this as an opportunity to improve its development strategies and will use Capacity 21 support to create an enabling environment for sustainable development. Included will be plans and strategies for sound environmental management and capacity building for all sectors involved in the sustainable use and development of Lebanon's resources.

#### 2 BACKGROUND

Environmental profile Political and social attitudes during the war placed few limitations on the use of natural resources, and Lebanon's environment has severely deteriorated from overexploitation. The depletion and degradation of land, water, air, coastal and other resources have reached critical levels, as has pollution by solid waste, sewage, chemicals and industrial development. A laissez-faire attitude has prevailed in Lebanon regarding land use planning, environmental regulation and the exploitation of natural resources, and no regulatory or monitoring legislation currently exists.

Cultural profile The years of civil conflict in Lebanon were also socially devastating. Emigration of skilled Lebanese was widespread, and by 1990 almost 750,000 people were displaced, exacerbating both human and economic suffering. Disadvantaged and vulnerable groups were particularly affected, compounding previous regional imbalance. Disparities between men and women have also been widened.

Lebanon's response. The Government of Lebanon has embarked on the implementation of a US\$ 2.25 billion Program of National Emergency and Reconstruction (NERP). The NERP concentrates primarily on the rehabilitation of water, waste water, solid waste, electricity, housing and education sectors. The Program is broadly managed by the Council for Reconstruction and Development (CDR). While the NERP has an implicit environmental component, it does not adequately integrate environmental concerns into its proposed rehabilitation and reconstruction.

The Government has also established the Ministry of State for the Environment. However, an outdated legislative framework and nonexistent enforcement mechanisms hinder Lebanon's ability to regulate activities to ensure sustainable development. Current development and reconstruction practices are therefore often launched in ways that are neither environmentally sound nor sustainable.

### **3 POINTS OF EMPHASIS**

Though the main thrust of this program will be support for environmental management, all sectors that impact sustainability will be supported and involved in implementation.

This is the first attempt to integrate environmental and sustainable development issues into the national planning process of reconstruction and development.

### **4 ANTICIPATED RESULTS**

- National institutions established for sustainable development.
- An effective legal and regulatory framework for sustainable development and effective administration and enforcement of this framework, including economic instruments and market incentives.
- Enhanced capacity of stakeholders to participate in and apply the Environmental Impact Assessment (EIA) process.
- Ability of the Ministry of Environment and other stakeholders to:
  - ensure coordination of environmental monitoring;
  - use the information acquired for improved decision making,
  - establish systems for integrated environmental; and
  - economic accounting, promote greater awareness of the need for sustainable development, and facilitate greater access to information for sustainable development.
- Availability of and access to resources necessary for sustainable development.

### **5 DEVELOPMENT OBJECTIVES**

- To create an enabling environment for integrating the principles of sustainable development in decision making processes in Lebanon

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**6 IMMEDIATE OBJECTIVES**

- 6.1 To establish national institutions for the sustainable management of development

**Indicators of Achievement**

- A program for the consultation and participation of all stakeholders in the planning of the mandate and functions of the Ministry of Environment (MOE) agreed and in operation
- Ministry of Environment Development plan approved by government
- Legislation to support the Ministry of Environment
- Ministry of Environment established

**How will Achievement be assessed**

- Capacity 21 reports

- 6.2 To develop an effective legal and regulatory framework for sustainable development

- 6.3 To propose actions for effective administration and enforcement of this framework, including economic instruments and market incentives

**Indicators of Achievement**

- Review of all policies, strategies and institutional arrangements relating to sustainable development
  - Existing laws revised
  - New laws drafted and presented to Government

**How will Achievement be assessed**

- Capacity 21 reports
  - Review of government legislative process

- 6.4 To enhance the capacity of stakeholders to participate in and apply the Environmental Impact Assessment (EIA) process

**Indicators of Achievement**

- Stakeholder groups identified and consulted
- Procedures for stakeholder participation and consultation, including criteria for participation, developed
- A program of awareness and training in operation

**How will Achievement be assessed**

- Interviews with stakeholder representatives: government, private sector, NGOs

- Workshop reports

6.5 To enhance the ability of the Ministry of Environment of Lebanon to:

- Ensure coordination of environmental monitoring.
- To use the information acquired for improved decision making; and
- To establish systems for integrated environmental and economic accounting.

**Indicators of Achievement**

- Environmental monitoring requirements and capacities of all sectors reviewed and assessed
- A cooperative inter-institutional program of environmental monitoring drawn up and agreed by cooperating parties
- Equipment, personnel and training needs defined
- Priority equipment obtained
- Environmental monitoring program in operation

**How will Achievement be assessed**

- Capacity 21 reports and interviews with representatives of sectors and institutions
- Capacity 21 reports
- Government of Lebanon reports

6.6 To enhance the capacity of the Ministry of Environment and of other stakeholders:

- to promote greater awareness of the need for sustainable development;
- to facilitate greater access to information to help secure the objectives set for sustainable development

**Indicators of Achievement**

- Implementation of the Sustainable Development Network Program (SDN) Proposal

**How will Achievement be assessed**

- SDN Program reports

6.7 To ensure that the necessary short and long term resources are made available for sustainable development

**Indicators of Achievement**

- Government strategy for funding development in a sustainable fashion
- UNDP strategy for IPF investment in sustainable development prepared
- A program of resource mobilization among donors operating

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**How will Achievement be assessed**

- Government reports
- Country Office reports
- Capacity 21 reports

**B. CAPACITY 21 PROGRAM SUMMARIES, NUMBER 10, HONDURAS**

**Program Title:** Integrated Program to Strengthen Indigenous Groups to Protect the Environment and the Cultural Patrimony

**Program Number:** HON/93/G81

**Start Date:** September 1993

**Duration:** 3 years

**Executing Agency:** Honduran Institute of Anthropology and History

**Capacity 21 Contribution:** 700,000 US\$

**UNDP / IPF Funds:** 300,000 US\$

**Cost Sharing:** 300,000 US\$, Government of Honduras, in-kind contribution 500,000 US\$, Third Party Cost Sharing

**1 IN BRIEF**

By working with indigenous groups who live in the most ecologically fragile Honduran forests, Capacity 21 will help Honduras to build legal instruments, technical resources, and human capacities that will harmonize external pressures with environmental protection. Institutional capacity in Honduras will be strengthened in order to integrate environmental conservation with human development in a manner that satisfies the aspirations of indigenous minorities, who are typically alienated from mainstream patterns of development.

**2 BACKGROUND**

Environmental Profile. Tropical forests are currently being deforested at rapid rates by migrant farmers and cattle ranchers, leading to loss of biodiversity and environmental degradation. Estimates of destruction are 15,500 hectares per year for coniferous forests and 64,500 hectares per year for broadleaf deciduous forests, the latter being the most important ecosystem for biodiversity. If these rates continue, the tropical forests of Honduras will disappear within the next twenty years.

Cultural Profile. Competing economic interests (primarily of migrant farmers, cattle ranchers and tourism developments) are forcing indigenous groups off their traditional lands, leading to a gradual extinction of these ethnic communities. The threat to survival of these communities is also a threat to their vast knowledge and a threat to the endangered species such as tapirs, spider monkeys, harpy eagles and others which have coexisted together for centuries.

Honduran Response. To combat the intensified occupation and degradation of their traditional lands, representatives of the Toplan, Lenca, Tawakha, Miskito, and Garffuna tribes recently presented a series of petitions to President Callejas requesting guarantees for "land tenure, personal security, and self-determination of their autonomous cultures". The President has recognized the need to support these indigenous groups in their efforts and has, in turn, supported the integrated environmental and development strategies proposed in this program.

### **3 POINTS OF EMPHASIS**

The social and economic aspirations of the communities that depend on natural resources for their survival must be considered and integrated into environmental protection plans and conservation goals.

Ethnic groups who still inhabit the forest are living examples of ecological harmony and can provide a wealth of knowledge regarding the forest flora and fauna.

This program is multi-disciplinary, involving indigenous groups and specialists in anthropology, agro-ecology, education, health, artisans and eco-tourism development..

### **4 ANTICIPATED RESULTS**

A legal framework that guarantees the survival of forest-dwelling ethnic groups while permitting the viable protection of biodiversity in fragile zones and the conservation of the nation's cultural patrimony.

A protected corridor system from the Rio Platano Biosphere to the Bosawas Reserve in Nicaragua.

A legal and functional consolidation of ethnic settlements in ecologically fragile zones and creation of buffer zones to contain deforestation by cattle ranchers and migrant farmers.

A technical plan for integrated resource management, combining elements of customary and modern management systems. A group of pilot communities will also be established to test this plan.

Strengthened public administration systems of the indigenous groups through training in community development, natural resource management, forest/biological reserve administration, eco-tourism and other fields.

A package of demonstration micro-projects at the village level, encompassing sustainable resource management, agroforestry, food security, primary health care, bicultural education, traditional crafts and eco-tourism under tribal control. Funding strategies for the implementation of these projects will also be created.

### **5 DEVELOPMENT OBJECTIVES**

5.1 Involve indigenous communities in the economic, political and cultural development of Honduran society

5.2 Achieve a rational use of natural resources, guaranteeing their continued existence to ensure ecological balance and to provide the population with the benefits of their sustained use as a basis for development of the region

### **6 IMMEDIATE OBJECTIVES**

6.1 Define a development concept for the region which incorporates the sustainable use of natural resources, by achieving the following objectives:

- 
- 6.2 Reform the public, private and non-governmental institutional structure for the promotion, management and coordination of development programs

**Indicators of Achievement**

- An understanding developed in government and in communities of traditional public administration systems
- Minimum capacities identified that is needed to guarantee survival of ethnic groups and biodiversity
- Indigenous people trained through specially designed training programs
- Increase in sharing of information between ethnic groups

**How will Achievement be assessed**

- An interdisciplinary study of indigenous systems
- Interviews with representatives of government and communities
- Capacity 21 reports
- Reports on training sessions. Interviews with trained people
- Interviews with representatives of groups

- 6.3 Involve local populations in the management and use of resources and in benefiting from them

**Indicators of Achievement**

- The legal and functional consolidation of ethnic settlements
- Creation of buffer zones to contain deforestation by rancher and migrant farmers
- Integration of traditional management systems and new technology in a plan for integrated resource management
- Plan tested in pilot communities
- Communities involved in micro-projects, and funding strategy for micro-projects in place

**How will Achievement be assessed**

- Government legislation documents, visits to settlements
- Government legislation, inspection of management plans for buffer zones
- Review of plan
- Reports on pilot programs
- Reports on micro-projects and funding strategy

- 6.4 Conserve and protect the ethnic cultural heritage of the indigenous population of the region as a means of strengthening their cultural and national identity

**Indicators of Achievement**

- Development of a legal framework that guarantees the survival of indigenous forest-dwelling groups while permitting the viable protection of fragile biodiversity and national patrimony
- Creation of new protected areas : establishing a protected corridor from the Rio Platano Biosphere to the Bosawas Reserve in Nicaragua

**How will Achievement be assessed**

- Government legislation
- Review of legal status of protected areas

## ANNEX 2. CHECK LIST FOR ASSESSING PROPOSALS TO CAPACITY 21

This checklist is a tabulated compilation of criteria and guidelines established by the UNDP Governing Council for programs to be supported under Capacity 21. Everything in the table supports the central principles of Agenda 21, to which UNDP Program Countries are signatories.

REQUIREMENT	SOURCE OF REQUIREMENT	COMMENT
<p>Country has demonstrated <u>strong commitment to implementing Agenda 21</u> and to achieving sustainable development. Commitment will normally be demonstrated through the actions of UNDP's main counterpart ministries, especially those concerned with central planning and finance. Commitment of specialized agencies, including environmental agencies may be insufficient if they do not have adequate support. Adequate funding of the agencies responsible for the implementation of Agenda 21 may be a good indication of commitment.</p>	<p>UNDP Governing Council.</p> <p>Agenda 21, Chapter 8 <i>Integrating environment and development in decision making</i>.</p> <p>Agenda 21 Chapter 8, Section 8.12 - <i>Strengthening National Capacity</i>.</p>	
<p>The nation's development plans in general and the Country Program in particular manifest support to sustainable development, and planning frameworks recognize the <u>long term nature</u> of investment in sustainable development. An aim is to bring about changes in commitment and attitude towards sustainable development.</p>	<p>UNDP Governing Council.</p> <p>Agenda 21, Chapter 8 <i>Integrating environment and development in decision making</i></p>	
<p>The program that Capacity 21 will support is designed to assist the achievement of sustainable development through the <u>integration of processes of sustainable development into national development planning</u></p>	<p>Agenda 21, Chapter 8 - <i>Integrating environment and development in decision making</i></p>	

REQUIREMENT	SOURCE OF REQUIREMENT	COMMENT
Country has adopted, or plans, <u>a broad programmatic approach</u> to achieving sustainable development.	Agenda 21, Chapter 8 - Section 8.12 - <i>Strengthening National Capacity</i> .	
The Capacity 21 proposal is of <u>central importance</u> in helping to shift development processes towards sustainable development. (i.e. it is not "just another" conventional program, and Capacity 21 is not simply being used to compensate for general shortage of resources).	UNDP Governing Council.	
The Capacity 21 proposal is <u>innovative</u> i.e. it helps to bring about a genuinely new and pioneering approach to sustainable development in the country concerned.	UNDP Governing Council.	
The catalytic nature of the Capacity 21 proposal can be demonstrated and will lead to the <u>mobilization of resources</u> for sustainable development by helping to plan national budgetary requirements, by helping to allocate national resources appropriately, and by securing external resources.	UNDP Governing Council.	
Although the outputs of Capacity 21 proposals will be national in impact, there must be <u>consistency with regional and global initiatives</u> including the GEF, Montreal Protocol etc.	UNDP Governing Council.	
Capacity 21 proposals should be formulated locally on the basis of a <u>participatory and transparent process</u> that	Agenda 21, Section 3 - <i>Strengthening the Role of Major Groups</i> - Chapters 27-32.	

REQUIREMENT	SOURCE OF REQUIREMENT	COMMENT
involves consultation with NGOs, the private sector, government, UN agencies and other donors. Proposals should give full support to the participation of civil society to participate in program execution.		
<u>UN agencies</u> should be included in consultations at all stages of proposal preparation, and involved in program execution where appropriate.	UNDP Governing Council.	
Proposals will normally give consideration to <u>improving access to information and networking within the country and between countries.</u>	Agenda 21, Chapter 40 - <i>Information for Decision Making</i>	
Preference given to good programs from <u>LDCs.</u>	UNDP Governing Council.	



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## **WORLD BANK SUPPORTED ENVIRONMENT INSTITUTION BUILDING INVESTMENTS**

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### **SUMMARY**

A main focus of Bank lending for the environment is to strengthen public sector institutions responsible for environmental protection and management at the national and subnational levels. As of July 1995, twenty such projects, involving commitments of nearly \$670 million and total project investments of close to \$1.2 billion, were under implementation. All of these projects have been approved since fiscal 1990 and almost two-thirds in the three years since UNCED (see Table 1 for projects approved since Rio). Many of these projects support implementation of National Environmental Action Plans. While some of these operations include sizable investment components, all of them include significant technical assistance, training, and studies components.

### **1 NEW ENVIRONMENTAL INSTITUTIONS PROJECTS**

Four new environmental institutions projects were approved in fiscal 1995 involving Bank financing of \$135 million for a total investment of more than \$220 million. Of these, three are comparatively small technical assistance operations, while the fourth is much larger, combining investment and institutional development components in the Russian Federation. The Benin, Honduras, and Trinidad and Tobago operations are described below; the work initiated in the Russian Federation is discussed in Figure 1. In addition, the Institutional Development Fund (IDF) is providing increasing support for activities with an environmental or social focus, as illustrated in Figure 2.

#### **1.1 The Benin Environmental Management Project**

The Benin Environmental Project will support the development of environmental management capacity at the national level and help the government of Benin to implement the National Environmental Action Plan adopted in June 1993. It will pursue capacity building and institutional support, including streamlining and strengthening national environmental responsibilities, reinforcing policy implementation and coordination mechanisms, promoting better preparation and enforcement of the environmental regulatory framework, developing an effective environmental regulatory framework, developing an effective environmental information system, and enhancing environmental monitoring and evaluation capability. The project will also promote public awareness of environmental issues and the integration of environmental considerations in the education system.

### STRENGTHENING ENVIRONMENTAL MANAGEMENT IN THE RUSSIAN FEDERATION

Like many other countries in transition to market economies, the Russian Federation has inherited a costly environmental legacy from decades of growth that neglected to take environmental factors into account in national investment decision making. As elsewhere, moreover, the environmental management system is fragmented and uncoordinated, with many government agencies sharing some responsibility for environmental concerns. Because the capital requirements for resolving environmental problems in the country are high, priorities must be set and interventions selected to address these priorities in a cost-effective manner. Among the institutional and financial problems that need to be tackled are the unreliability of much existing environmental data, ineffective laws and regulations for environmental protection, poorly defined management and organization responsibilities, inadequate budget allocations, a breakdown of the traditional command and control system for pollution abatement and nature protection, inappropriate criteria for emission standards, and the lack of sufficient medium-term investment funds.

To support efforts to address these issues, a loan of \$110 million was approved this year by the Bank for the Environmental Management Project to support, among other things, environmental management and institutional strengthening at the federal level and in the North Caucasus, Upper Volga, and Urals regions. More specifically, the project will assist the Russian Federation in establishing an Environmental Framework Program, estimated to cost a total of \$282 million over four to five years whose objectives are to:

- incorporate environmental and natural resource management concerns directly into the economic, social and political adjustment process at the federal and regional levels of government;
- strengthen and streamline government institutions for environmental and natural resource management;
- improve the formulation and implementation of environmental and natural resource management systems;
- strengthen financial delivery mechanisms to address priority environmental management investment needs through the setting up and initial capitalization of a National Pollution Abatement Facility; and
- facilitate the flow of donor and multilateral resources to the environmental protection sector.

**Figure 1. Strengthening Environmental Management in the Russian Federation**

1.2 The Honduras Environmental Development Project has three principal sets of objectives:

- to strengthen government capacity for environmental planning, policy, and regulation, interagency and intersectorial coordination, and monitoring and enforcement of environmental laws and regulation;
- to assist the Ministry of the Environment in implementing national and participatory system of EAs and in developing methodologies for their preparation, processing, and review; and
- to develop environmental management capacity at the municipal level, with greater grassroots participation, and increase financial support for pilot environmental projects at the municipal and community levels as well as for small and microenterprises using the Honduran Social Investment Fund.

**USING THE INSTITUTIONAL DEVELOPMENT FUND TO IMPROVE ENVIRONMENTAL MANAGEMENT**

The Institutional Development Fund is a grant facility for financing technical assistance for institutional development not directly linked to planned Bank Group lending operations. The Institutional Development Fund enables a quick response for funding small, action-oriented initiatives identified during the Bank's economic and sector work and policy dialogue. The Institutional Development Fund came into operation in 1992, and in the first two years committed nearly \$27 million in grants to 101 projects, funding a wide variety of recipients and critical institution-building activities that otherwise might not have been funded.

The Institutional Development Fund's focus is broad, but a number of its grants have social and environmental objectives at their core. For instance, a \$190,000 Institutional Development Fund grant was approved to strengthen organizational management in agriculture and natural resources in Malawi; a \$100,000 grant was awarded to build capacity for environmental management in Sao Tome and Principe; \$190,000 was granted for formulating environmental policy and strengthening environmental capacity in the Lao People's Democratic Republic; and \$430,000 was awarded for a local environmental management program in the Donetsk Oblast, Ukraine, which includes an air quality management program and a public awareness component as a first step in Ukraine's budding environmental program. Other grants awarded by the Institutional Development Fund since 1992 have been used to carry out innovative institution-strengthening programs for indigenous peoples in Bolivia, Chile, and Guatemala; to manage national cultural property in Albania; and to provide assistance to China's Ministry of Water Resources and India's Ministry of Forestry and Environment.

**Figure 2. Using the Institutional Development Fund to Improve Environmental Management**

1.3 The Trinidad and Tobago Environmental Management Project

The Trinidad and Tobago will also work to establish the necessary institutional arrangements for environmental regulation and management, along with a priority environmental work program based on a National Environmental Action Plan to be formulated under the project. It will include a public awareness program and an environmental training program for the public and private sectors. It will also support the activities of the Environmental Management Agency. During project preparation, the government fostered a major participatory effort to draft legislation for the agency, which was opened up for public review and substantially revised on the basis of comments received before the legislation was introduced into parliament.

In addition to the operations approved in fiscal 1995, the Urban Environmental Management Project in Colombia, currently under preparation, should be noted because of its highly innovative nature. This proposed technical assistance operation capitalizes on the government decentralization currently taking place in Colombia to build institutional structures for managing environmental problems in four major urban centers: Barranquilla, Bogota, Cali, and Medellin. This will be the first Bank project to focus exclusively on environmental institution building at the urban and municipal level. In each of these municipalities, new environmental institutions have been established to address a broad range of urban environmental issues, including water supply and sewerage, water pollution, air pollution, and waste management. The proposed project will support these institutions by focusing on environmental planning, organization structures, regulatory strengthening, and the provision of training and equipment for the participating cities.

Environmental institution-building projects often face particularly complex implementation challenges due to the cross-sectorial and cross-jurisdictional nature of many environmental problems, the likelihood that many environmental agencies are new or weak, and the critical importance of strong political support for achieving environmental improvement goals. Among such operations, which have been under implementation for several years, important lessons can be learned from the Environmental Management Project in Poland, approved in 1990, which is nearing completion and is one of the most successful environmental institution-building projects to date. Much of this success is due to solid preparation work, which included setting clear priorities and effectively collaborating between Polish and Bank specialists, together with firm government commitment to the project's objectives. Strong local technical and institutional capacity and the continuity of key project personnel on both the borrower and the Bank side have also been important factors, as has been the pragmatic approach taken to project design, which has included consideration of procurement arrangements from the earliest stages of preparation. From the very beginning, moreover, several large but heavily polluted municipalities (Katowice and Krakow among others) have been formally involved in project activities, together with the central environmental agency, reflecting the project's serious commitment to decentralization. Flexibility during implementation has likewise been a significant element in the project's highly satisfactory performance.

**Table 1. Projects for Environmental Institutions, Fiscal 1993-1995**  
(millions of dollars)

<i>Fiscal year and country</i>	<i>Project Name</i>	<i>Loan/Credit (L/C)</i>	<i>World Bank Financing</i>	<i>Total Project Cost</i>
<b>1993</b>				
Bolivia	Environmental Technical Assistance Project	C	5	5
Chile	Environment Institutions Development Project	L	12	33
China	Environment Technical Assistance Project	C	50	70
Ghana	Environment Resource Management Project	C	18	36
Korea, Rep. of	Environmental Research and Education Project	L	60	97
TOTAL			<b>145</b>	<b>241</b>
<b>1994</b>				
Gambia	Capacity Building for Environmental Management - Technical Assistance	C	3	5
Korea, Rep. of	Environmental Technology Development project	L	90	156
Morocco	Environmental Management Project	L	6	11
TOTAL			<b>99</b>	<b>172</b>
<b>1995</b>				
Benin	Environmental Management Project	C	8	9
Honduras	Environmental Development Project	C	11	13
Russian Federation	Environmental Management Project	L	110	195
Trinidad and Tobago	Environmental Management Project	L	6	11
TOTAL			<b>135</b>	<b>228</b>
Total since UNWED, fiscal 1993-1995			379	641
Active projects approved before fiscal 1993			289	536
Total Active Portfolio			668	1,177



## THEME #5:

### INSTITUTION BUILDING : UNEP WORKSHOPS

A training manual, case studies, and a discussion guide are available to explore design issues and options for organizing a compliance and enforcement program; developing human information and financial resources; permit processing; and implementing a compliance monitoring and enforcement response program. Case studies provide a common point of departure for discussion.

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1. Synopsis of UNEP Manual on Institution Building.....	283
2. Synopsis of Capacity Building Support Document: Organizing Environmental Permit, Compliance, and Enforcement Programs .....	285
3. Synopsis of Capacity Building Support Document: Financing Environmental Permit, Compliance, and Enforcement Programs, .....	286

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See related paper from other International Workshop and Conference Proceedings:

1. Instructions for UNEP Institution-Building Workshops, *R. Glaser*, Volume II, Oaxaca, México



**SYNOPSIS OF UNEP MANUAL ON INSTITUTION BUILDING**

Industry Environmental Compliance

A Training Manual

**UNEP IE TECHNICAL REPORT NO. 36**

UNEP IE has produced a training manual to help governments develop their institutional ability to ensure industry compliance with their country's environmental standards. "Industry Environmental Compliance: A Training Manual" provides the context, examines different approaches, identifies critical elements of success and discusses options when resources are limited in developing an effective compliance and enforcement program. It promotes an integrated approach to help steer industry towards cleaner production options rather than end-of-pipe solutions to meet environmental requirements. It complements an earlier UNEP IE publication on "From Regulations to Industry Compliance: Building Institutional Capabilities" which prompted world-wide interest and requests for assistance to put its principles into practice.

The training manual consists of four separate modules. The first module on institutional aspects examines: why an effective compliance and enforcement program is important; its objectives and functions; its optimal balance between the inspection, permit and enforcement functions; the necessary interaction among government bodies, industry and the public; how to establish priorities and evaluate success; how to phase-in functions as resources become available. The second module focuses on permits and provides answers to such questions as: what is an environmental permit, its role, its content; who should be required to have a permit, who should issue it and what criteria should it be based upon; how to make the permit enforceable and what to do when laws or regulations are imprecise; what to do when resources are limited and how to introduce integrated permits. How to monitor and enforce compliance is covered in the third module. Three sections focus on industry self-monitoring, government inspections and enforcement, covering issues such as: who should be required to self-monitor; what, how and when; how to adopt an integrated approach to self monitoring; how to develop an inspection strategy and what guidance to provide to inspectors; how to convert to integrated inspections; how to develop an enforcement strategy with appropriate responses to different violations; what options exist when resources are limited. The fourth module deals with human and financial resources and examines the types of resources needed for different functions and funding options. The appendices include: a case study of a fictitious country providing a discussion of common problems governments encounter in each of these four areas; and a summary of the key points of each module in a form which can be easily photocopied onto overheads.

The training manual can be used for individual study or for group training in local, regional national or international settings. It is now available from UNEP IE. Requests for UNEP IE assistance in carrying out the training programs may also be considered.



## SYNOPSIS OF FINANCING ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT PROGRAMS

Capacity Building Support Document for Environmental Compliance and Enforcement Programs

### PURPOSE

Consistent with the goals of the Fourth International Conference on Environmental Compliance and Enforcement, its international sponsors, and the Executive Planning Committee, this document provides guidance on budgeting and financing methods that can be used to maximize resources available for environmental compliance and enforcement programs. Through illustrative examples, it describes how environmental compliance and enforcement programs are financed throughout the world. Information from more than 50 countries is presented. The document was designed for use by government officials and individuals associated with non-governmental organizations who are directly responsible for design, budgeting, and management of environmental compliance and enforcement programs.

### SUBJECT AREAS

In general, the document covers: budgeting, specific funding mechanisms (taxes, fees, fines, grants, loans/debt, voluntary mechanisms, and public-private partnerships), measures to minimize financing demands (tradable permits, subsidies, deposit-refund systems, resource allocation, and technical training) institutional mechanisms to manage the flow of funds (general fund mechanisms, dedicated funds, funds transfer, public authorities, bilateral/multilateral mechanisms), and additional sources of additional sources of information.

### SCOPE

Information on financing mechanisms used to fund environmental compliance and enforcement programs from the following countries:

#### *Africa & Middle East*

Burkina-Faso	Egypt	Ghana	Israel	Mauritius
Morocco	Nigeria	South Africa	Tunisia	

#### *Asia*

Australia	China	Hong Kong	India	Indonesia
Japan	Malaysia	Nepal	New Zealand	Pakistan
Philippines	Singapore	South Korea	Sri Lanka	Taiwan
Thailand	Vietnam			

#### *Europe*

Albania	Austria	Belgium	Czech Republic	Denmark
Estonia	Finland	France	Germany	United Kingdom
Greece	Hungary	Ireland	Italy	Lithuania
The Netherlands	Norway	Poland	Portugal	Romania
Russia	Spain	Sweden		

#### *North America*

Canada	Mexico	United States
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#### *South America*

Argentina	Brazil	Chile	Columbia	Uruguay
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## **SYNOPSIS OF ORGANIZATIONAL DESIGN ISSUES: A COMPARISON OF INTERNATIONAL COMPLIANCE AND ENFORCEMENT PROGRAMS**

Capacity Building Support Document for Environmental Compliance and Enforcement Programs

### **PURPOSE**

Consistent with the goals of the Fourth International Conference on Environmental Compliance and Enforcement, its international sponsors, and the Executive Planning Committee, this document provides information regarding the organization of environmental compliance and enforcement programs in 19 countries drawn from seven regions of the world. It examines *which institutions* conduct *what activities* and *why*, across tiers of government (national, regional, local) and within a tier, among agencies. Countries facing organizational issues may benefit from models that other nations use to organize environmental compliance and enforcement programs, especially where the two nations share similar environmental, social, cultural, political, geographical, or economic conditions.

### **SUBJECT AREAS**

This document is based on a series of country profiles, which are presented in separate country appendices at the end of the document. Country-specific information is contrasted in a series of comparative tables that examine the extent to which environmental compliance and enforcement activities (establishing requirements, writing permits, monitoring, inspections, etc.) are centralized at the national level of government, or decentralized at regional or local levels; dominated by a single agency at any one level or spread across numerous agencies; integrated or coordinated among agencies; organized by environmental media (air, water, natural resources, solid waste), or organized by industry type. The role of non-governmental organizations is discussed. Country examples are used liberally to illustrate main points.

### **SCOPE**

At least some information is presented for each of the following 19 countries:

India	Indonesia	Philippines	Singapore
Sri Lanka	Thailand	New Zealand	Jamaica
Hungary	The Netherlands	Norway	Poland
Canada	Mexico	United States	Brazil
Chile	Nigeria	South Africa	

**THEME #6:**  
**SPECIAL TOPIC AND INSTITUTION-BUILDING  
WORKSHOPS**

Expert papers were requested on the following workshop topics and the issues listed below each workshop were addressed during facilitated discussions at the workshops.

- A *Automation and Enforcement: Available Support Systems*
- B *Strategic Targeting for Enforcement*
- C *Integrated Permitting and Inspection*
- D *Compliance Monitoring*
- E *Promoting Voluntary Compliance: Environmental Auditing, Outreach, and Incentive Programs*
- F *Measures of Success*
- G *Communications and Enforcement*
- H *Public Role in Enforcement: How to Go About Creating and Supporting Effective Citizen Enforcement*
- I *Criminal Enforcement: INTERPOL, Role of Criminal Enforcement in Environmental Enforcement*
- J *Enforcement of Economic Instruments*
- K *Take Back Laws Enforcement*
- L *Creating Enforceable Permit Programs and Requirements: Discussion Focus on Water Pollution and Contamination of Drinking Water Supplies*
- M *Transboundary Illegal Shipments of Hazardous Waste: Tricks of the Trade*
- N *Montreal Protocol: Enforcement of CFC and Related Requirements*
- O *Enforcing Domestic Programs Implementing International Agreements*
- P *Collaborative International Targeting of Enforcement*
- Q *Organizing and Financing Programs (Opportunity for Further Discussion from UNEP Workshops)*
- R *Enforcement Policy and Authorities (Opportunity for Further Discussion from UNEP Workshops)*



## SPECIAL TOPIC WORKSHOP A

### Automation and Enforcement: Available Support Systems

Papers address the following issues:

- Potential uses of automation to support compliance monitoring and enforcement response functions.
- Software systems used to support enforcement and availability to other nations: how copies can be obtained.
- Key pieces of information that are typically in such systems.
- Evolution of these systems over time and what features characterize beginning systems.
- How information in the systems is maintained and kept up to date.
- Typical report formats, to whom these reports go, and for what purposes.
- Linkages between information systems used:
  - For managing permit issuance or inventories of sources of pollution, and those used to monitor compliance.
  - Information systems used to manage inspection programs, and those used to manage source self-monitoring information.
- How systems are managed in highly decentralized settings and options for establishing compatibility and exchange.
- Features of automated systems that make them:
  - most reliable and up to date;
  - supportive of strategic targeting of enforcement resources; and
  - user friendly.
- How to address issues of confidentiality and access.

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1. Information Systems to Support Compliance and Enforcement, <i>C.R. Galloway</i> .....	291
2. See also Cradle-to-Grave Compliance Tracking of U.S./Mexican Transboundary Hazardous Waste; The Haztracks Tracking System, <i>S. Coleman, J.V. Schultes</i> , Theme 6, Workshop M .....	711

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## **INFORMATION SYSTEMS TO SUPPORT COMPLIANCE AND ENFORCEMENT**

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### **SUMMARY**

A general overview of the types of information and information systems that support the United States' compliance assurance and enforcement programs at the national, regional and state levels including the need for national information and national systems, typical data, evolution of enforcement systems and public access to the data.

## **1 REGULATORY ENFORCEMENT FRAMEWORK IN THE UNITED STATES**

Environmental protection is implemented through three major groups in the United States. These groups are the States, the Environmental Protection Agency's (EPA) ten Regional offices, and the Headquarters office of the EPA. In most environmental programs, EPA's Headquarters office sets national goals and objectives, and establishes policies and general performance expectations. Headquarters offices are also often closely involved with the formulation of new environmental bills by Congress. EPA is responsible for national compliance monitoring and enforcement of environmental laws and for communicating information about these programs to the public.

The majority of Federal environmental statutes are eventually delegated to the States for implementation. In these cases, individual state environmental agencies implement the enforcement program (i.e., conduct inspections, monitor compliance and take enforcement actions). States may also implement additional state-specific statutes and may be more stringent than the Federal statutes and regulations. States are often subdivided into regions or districts within a State, and these districts are sometimes semiautonomous units that implement enforcement programs in their geographic area.

EPA Regions oversee implementation by the States and attempt to ensure consistency among States. Where States have not yet been delegated an environmental program (e.g., a State may have approval to implement the wastewater enforcement program but not the sludge control portion), the federal EPA through one of its ten Regions will implement the program directly. Thus, both the State and EPA may be implementing separate parts of a program at the same facilities. The Regions negotiate with the States to set performance targets for key activities such as inspections and enforcement response.

## **2 THE IMPORTANCE OF INFORMATION**

Information is critical to the work of all three groups; EPA Headquarters, EPA Regions and States. The types of information required by each group however, do vary to some degree. In general, the States (and EPA Regions where they implement programs) will require the

most detailed information, including a variety of data on individual regulated facilities. The Regions will require less detail and more summarized information useful to their role in oversight and performance evaluation. This summarized information might include numbers of inspections conducted, numbers of administrative orders issues etc. EPA headquarters relies heavily on summarized information, however, it too uses facility-specific information as will be described below.

## 2.1 Basic types of information

### 2.1.1 Inventory

Information on the number, size, location, and character (i.e., an inventory) of the regulated universe of facilities is critical to understanding which facilities are subject to specific laws and regulations. It is important to keep the inventory up to date as facilities shut down, start up, move, change ownership or type of operations. It is often useful to compare and contrast different types of regulated facilities. For example, operators of small printing shops may be characterized by limited resources and educations and may require special outreach to foster understanding of environmental requirements. While large printing businesses may more typically have specific staff trained to follow environmental issues and requirements.

### 2.1.2 Location

It is vital that the regulators know specifically where facilities are located. This information is used not only to enable the regulators to visit the site, but to understand the possible impact the facility may have on nearby populations or surrounding ecosystems. Locational information is needed when selecting sites for inspections, and for targeting outreach and education efforts to support geographic initiatives. The State may target a specific watershed for priority action, and it is necessary to understand which facilities are located within or contribute to that watershed. Thus, it is useful to know not only where the "front door" is located, but also where the emission points are (e.g., air stacks, wastewater outfall pipes). Many of EPA's data systems contain several sets of locational information including the mailing address, the plant addresses and the location of the emission points.

### 2.1.3 Compliance and enforcement history

Information on facilities' compliance histories is critical in targeting "bad actors" and to minimize potential risk. Information on violations also facilitates deciding on an appropriate and consistent enforcement response. States and EPA must maintain accurate and up to date records on enforcement actions taken against a facility so that the regulator can ensure proper escalation of actions if the violations are not corrected in a timely fashion. It is also important to know what actions have historically been taken at a facility to anticipate what level of action may be appropriate to respond to subsequent violations.

## 2.2 Importance of automated information

It is possible to implement compliance and enforcement programs using non-automated methods using paper copies and careful filing. However, automating the key information described above provides ease of access, quicker response and flexibility in analyses. Even a small State program may have thousands of regulated facilities so finding and compiling even simple requests for information can take a significant amount of staff time. Aside from the physical limitations of working with paper copies, automating compliance and enforcement information allows the analyst

to compile, compare and to correlate large amounts of data. For example, automated programs can be created to generate inspection targets based on a complex set of conditions including size, types of pollutants, compliance history, and geographic location. Data can be sorted by industry category, by emissions, by proximity to sensitive ecosystems, etc. Tables 1, 2 and 3 illustrate the types of complex reports which can be produced using automated data systems. Table 1 shows compliance by media program, numbers of enforcement actions, and numbers of facilities by Region and by industry type. Table 2 shows a breakdown of populations served by different sources of drinking water. Table 3 illustrates the multi-media picture for facilities showing whether the facility is a "significant violator" under any media programs.

### 2.3 Typical reports

Automated systems allow compliance and enforcement managers to generate periodic reports useful in managing their resources. Included are sample printouts of reports from some of EPA's major compliance and enforcement data systems to illustrate typical reports which are generated. Table 4 shows the usefulness of maintaining inventory data. It identifies which wastes are produced, quantities, who exports, transports and who receives wastes. Table 5 shows a typical inspection report showing the facilities which have received inspections, when the facility was inspected, the type and who (State/EPA) conducted the inspection. Table 6 is a typical enforcement action report showing that status of active civil judicial actions, that is, where the case is in the judicial process. Finally, Table 7 shows a multimedia picture of a facility indicating types of violations, inspections and enforcement actions.

## 3 KEY DATA TYPES COMMON TO ENFORCEMENT SYSTEMS

Much of the compliance and enforcement information found in State and EPA's systems is similar and falls into the following types:

- facility descriptors;
- compliance monitoring data;
- types of enforcement and other action;
- results of actions on compliance; and
- environmental results of actions.

### 3.1 Facility descriptors

Nearly all of EPA's compliance and enforcement databases are "facility oriented". The major exception is the Enforcement "Docket" system which is "enforcement case oriented". Of the facility oriented systems, some or all of the following information is usually found in each database.

- facility name;
- physical location (street, city, county, State, zip code);
- mailing address (street, city, county, State, zip code);
- latitude and longitude of physical address (including method, scale, and code of accuracy);

- watershed (hydrologic unit code);
- permit or other identifying number;
- Standard Industrial Category (e.g., petroleum refining, animal feedlot etc.);
- name, phone number of plant operator;
- name and address of owner;
- type of facility (varies by program e.g., major/minor, direct/indirect discharger, private/public water supply, etc.);
- status code (active/inactive); and
- unique facility-specific information (e.g., seasonal facility).

### 3.2 Compliance monitoring data

Compliance monitoring data includes inspection data and where applicable self reporting data. These data elements may include the following types of data:

- type of inspection conducted (e.g., sampling, records review);
- date of inspection;
- responsible organization (State, EPA or joint inspection);
- date inspection report is submitted;
- result of the inspection (violations found);
- date self monitoring report received;
- parametric data from self monitoring; and
- violations detected based on self monitoring data.

### 3.3 Types of enforcement and other actions

Enforcement action data describes the nature of the response to violations detected. EPA's databases vary in their capability to link specific violations to corresponding enforcement actions. Some systems do not have any linkage so it is impossible to verify which violations were addressed by an enforcement action, and often whether the noncompliance was resolved. The following data is typical in describing enforcement actions:

- enforcement action proposed (e.g., proposed administrative order);
- enforcement action issued (e.g., warning letter issued, judicial referral, administrative order issued);
- date of enforcement action;
- responsible organization (State, EPA);
- proposed penalty amount (\$);
- final penalty amount (\$);
- date administrative hearing requested;
- date appeal filed; and
- date action concluded.

### 3.4 Results of actions

Enforcement actions often include schedules the violator must follow to return to compliance. These schedule milestones are also included in the databases. In addition, there may be other conditions or supplemental environmental projects that are included in the conditions associated with an enforcement action. These may include restoration activities to cleanup damage to the environment, research activities relevant to the environmental problems at the site (e.g., research into biological affects of a pollutant spill or discharge), or compliance promotion activities such as development of advertisements to educate the regulated community and/or the public on the importance of compliance with environmental laws. The data associated with these types of activities varies widely and may include:

- schedule requirements and milestone dates (e.g., when phases of construction are to be completed, when status reports are required); and
- supplemental environmental projects (type and monetary value).

Recently, EPA has developed "measures of success" to monitor the environmental results of our enforcement actions. The data associated with these measures includes:

- type of injunctive relief required and value (\$);
- amount of pollution prevented through the action;
- compliance promotion activities; and
- impacts (e.g., reduced worker/population exposure).

## 4 EVOLUTION OF DATABASES TO SUPPORT ENFORCEMENT

Most of EPA's major databases were developed as national environmental programs were first being implemented in the late 1970s and 1980s. These databases were developed by EPA headquarters but with regional and state implementers in mind. The systems were developed to fulfill information needs at all three levels; national, regional and state.

EPA chose to design systems to meet all needs for several reasons. First, in the beginning of most environmental programs, EPA regions were the only implementers. Programs were delegated to States only after the States met certain standards and were approved by EPA. Thus, EPA needed these systems to operate the programs themselves. Second, designers believed that if the implementers used the systems, this would provide an incentive to keep the data accurate and timely. This approach resulted in highly complex, large, varied systems. To the credit of the system designers, while very complex, many of the systems actually fulfill most of the needs at these three levels. Unfortunately, other systems found that state variability made it impossible to have one system that would meet all states' needs as well as those of EPA headquarters and regions, and these systems are undergoing major redesign.

There is currently considerable debate over the role of national information systems especially in light of movements to reduce budgets, and to relax federal oversight of state programs. Some believe that EPA should not have access to state data and have built two level databases in which only core data is uploaded from the state systems to the national system. Clearly, this is a complicated issue, and one can argue that it is more efficient to have national systems than to have each state develop its own. In addition, federal oversight must rely on information to

ensure the effectiveness of state programs which argues for the availability of more, rather than less information. Depending on the outcome of these philosophical debates, the databases may need significant revision and redesign to reflect the chosen approach.

Enforcement databases were designed to support media-specific enforcement programs (e.g., wastewater, drinking water, hazardous waste). Since these were designed at different times, by different offices, they are not compatible in terms of hardware, software, design, data standards, or definitions. The evolution of media databases has made integrating data extremely difficult (as discussed below). EPA recognizes that significant improvements should be made to many of the major databases to facilitate integration, and to make better use of modern technologies. Unfortunately, EPA's regulatory framework and organization by media makes significant, Agency-wide improvements extremely difficult to achieve. Within media-specific systems, however, there is evolution and constant improvements to the data systems.

#### 4.1 Flagging noncompliance

Many of EPA's compliance databases record that a violation was detected, but do not record the supporting data explaining the nature of the violation. While this approach is effective in identifying facilities needing action, it does not facilitate tracking trends in violations. This trend information can be valuable in designing compliance assistance activities and in designing a flexible enforcement response plan.

In some systems, once a facility is flagged in the system as being in noncompliance, a facility remains in this status indefinitely, even if the violations are resolved. This may be caused by the lack of a linkage between violations and enforcement actions. If facilities remain identified as violators for long periods of time, the usefulness of the information to target actions and to monitor compliance rates diminish significantly.

#### 4.2 Detecting noncompliance

Some systems are able to track underlying compliance data and identify noncompliance determinations. In these systems it is relatively easy to designate violating facilities based on the data in the system and to record a return to compliance as well. The linkage between the underlying data and the status of the facility (in compliance or in violation) makes the system effective in generating periodic lists of enforcement targets and in monitoring compliance trends over time.

#### 4.3 Facility linkages, multi-media

EPA has discovered that the independent development of individual, media-specific information systems has led to great difficulty in linking information among systems for an individual facility. Many facilities (although a minority overall) are multi-media, meaning that they are regulated under more than one program. Information on these multi-media facilities is therefore found in more than one database. In many cases the name of a given facility varies from system to system along with address and other key information. The Agency has devoted significant resources to linking facilities and assigning key identifier numbers, but this effort has not been completely successful and linkages remain incomplete.

EPA has shifted much of its enforcement focus from a media-specific orientation to a multi-media and industry sector approach. Under this enforcement approach EPA must generate a full compliance picture at specific facilities or groups of facilities. This information is used to

generate multi-media risk and trend information for national targeting of compliance and enforcement actions. As a result of these shifts in enforcement, there is even greater pressure to accurately link data among the systems.

The issue of facility linkages has been raised to the highest levels of the Agency and was chosen as the most significant Agency information resources management issue for 1995 and beyond. An Agency-wide effort has begun to redesign the way facilities report information to EPA with an eye to providing one key identifier number to each facility. In the short term, EPA is attempting to use all available linking mechanisms to facilitate generation of multi-media compliance information.

#### 4.4 Technology shifts

Many of EPA's compliance databases were developed in the 1980s and were built using the software and hardware technologies then available and supported at EPA. In the intervening years, significant changes have clearly occurred in software and hardware. Both lack of funds to keep data systems current and the inertia involved in changing databases used by hundreds of EPA and State users acted to slow modernization of many systems. As a result, several key enforcement databases including the Enforcement Docket, the Permit Compliance System, the Resource Conservation Recovery Act (hazardous waste) Information System and the Air Facility Subsystem have not been modernized in recent years. These systems are all currently maintained on the Agency's mainframe computer.

These mainframe systems are relatively difficult to access when compared to the desktop personal computer. And, the software on the mainframe is non-intuitive making it more difficult to use. The software often requires the user to understand some programming and a great number of codes. The latest user-friendly features we are coming to expect on the desk top such as windows, help functions, and graphical user interfaces are not available on these mainframe applications. The EPA is moving toward non-mainframe, client server technologies and many system managers are currently examining the feasibility of this approach. The challenge is to use the power and capabilities of the PC while still operating an effective system on an appropriate server. Unfortunately, lack of funds is slowing this modernization process.

## 5 HOW INFORMATION IS REQUIRED AND ENTERED INTO DATABASES

Reporting to the national databases comes from both the regulated entities and from the EPA and/or State regulators. Information submitted by the regulated facilities is required through separate legislation e.g., Clean Water Act, Clean Air Act. These statutes require either national reporting requirements or reporting through individual or group permits under the statutes. The information submitted by the facilities includes information about the facility, such as location, name of plant operator, industrial classification (SIC), numbers and locations of pollutant discharge points. These types of information are usually submitted initially in a permit application and updated only if facility conditions change over time. This information is usually submitted in written form to the EPA or State and entered into the databases manually.

In some programs, periodic reports are required from facilities. These may be status updates or progress reports on predetermined schedules. The State or EPA will record and enter into the database the date the reports were received to monitor and record any late submittals.

### 5.1 Self monitoring data

In addition to information about the facility, facilities may be required to submit information on actual discharges. Where statutes and/or permits require self monitoring and reporting of discharge information, this compliance information is submitted on a periodic basis e.g., annual to monthly reports may be required. Where compliance data is self generated and reported, compliance monitoring can be done off-site. Where the regulatory agency receives self monitoring data, the EPA or State enters the data into a database and compliance is calculated automatically.

### 5.2 Inspection data

Self reporting of compliance data is not required under many EPA programs and compliance monitoring is done solely through inspections by the regulators. In addition, inspections are conducted to supplement and verify self monitoring data. Information about the inspection such as when it was conducted, the type of inspection (records review, sampling etc.), and the results of the inspection are generated by the inspector and are eventually entered into the national database.

### 5.3 Technology shifts in data entry

While the majority of data from facilities is still entered manually by EPA or State staff, EPA is moving quickly to use more cost effective approaches. Other technologies are being employed to save resources and time, and to increase data quality. These techniques include use of optical character readers which scan documents and automatically upload the data into an electronic file which can be uploaded to a database. This technique requires the use of standardized forms and typed submittals.

Another major improvement in data entry is electronic data interchange. This technique allows the facility to directly transfer data electronically from their computer to the national database. Many States currently achieve electronic transfer through the use of computer disks which they often send to the facility preformatted to receive specific, required information and which are then mailed back to the State for uploading to State databases. EPA is developing standard formats, security procedures and establishing the infrastructure to handle electronic submittal of large amounts of data into national systems. After the initial configuration and mapping are established at a facility, this approach will greatly reduce the resources needed by the facility to generate the required paper reports and significantly reduce the resources needed by EPA and/or State to enter the data by hand.

## **6 MAINTENANCE AND ENHANCEMENT OF SYSTEMS**

Many of EPA's compliance systems have hundreds or even thousands of users at the States and in EPA's Regional offices. With user communities of this size and users who have different needs and desires, EPA's systems must establish and use formal processes for making changes to the databases. These "change management" processes involve both State and EPA users and management in nominating desired changes and then voting on the final changes.

### 6.1 Role of user communities

Most of EPA's compliance and enforcement systems were developed to support both State and EPA users across the country. In the case of the Permit Compliance System for example, the user universe is about 1,000 strong and located in all States across the country.

### 6.2 Enhancement, change processes

The extent of user involvement in the decision-making process varies among systems and in most cases, EPA program and system managers hold effective if not official veto powers. In most cases, program managers divide the funds available for system enhancements into "required" changes and "user specified" changes. The "required" changes may include enhancements to incorporate new regulatory requirements (e.g., to include sludge facilities in the water program database) or Agency required data elements (e.g., facility latitude and longitude were mandated by the Agency for all systems.) There may also be required changes to enable the system to operate more efficiently or to fix software problems (e.g., to allow dates after the year 1999).

User specified changes are those actually suggested by the State or EPA users to make the system more usable, or to provide codes or functionality to support user-specific conditions or initiatives (e.g., to allow users to distinguish facilities targeted in a compliance outreach activity). These changes are usually nominated, described and discussed in user conference calls or meetings and then voted on by the user community with the most widely supported changes enacted within budget constraints.

### 6.3 Modernization efforts

Much like system enhancements, system modernization efforts usually involve representatives from all major user communities. Modernization projects vary widely with various system managers using different tools and analytical frameworks. In some cases, the effort to modernize the information system begins with a comprehensive look at the entire regulatory program. One such effort, in the hazardous waste program, is currently examining what information is needed to operate the program and will eventually translate these information needs to data and system requirements. These projects usually take several years and several million dollars to conduct; some modernization efforts at EPA have taken nearly 10 years (e.g., Office of Water's STORET system modernization has taken over 5 years and will not be completed for several more years).

## 7 THE ROLE OF NATIONAL SYSTEMS IN A DECENTRALIZED SETTING

The EPA Headquarters has a unique role in information management to support compliance and enforcement efforts even though most actual implementation occurs at the State or EPA Regional level. EPA maintains national information systems to:

- promote a nationally consistent environmental protection;
- provide national environmental information to the public; and
- target environmental efforts.

## 7.1 Promote national consistency

Access to national data helps EPA promote national consistency and ensure minimum standards of environmental protection are provided to all Americans. These efforts seek to protect the public by discouraging/removing economic incentives for pollution; minimizing interstate transfer of pollutants; and creating a "level playing field" for U.S. business. EPA's responsibility is to the citizens of the United States, not just a particular area of the country.

EPA needs national data to ensure that national environmental goals are achieved. While the specific information required from states may change over time, baseline nationwide data is necessary to identify when national standards are not being met and to appropriately direct federal involvement. More flexible oversight approaches, such as the Performance Partnerships, will continue to rely on sound state-by-state data.

### 7.1.1 Evaluate state actions

Effective and uniform enforcement relies on compliance information. EPA systems collect information on permit limits, inspections conducted, violations cited and enforcement actions taken. Comparisons of this data highlights areas where states may need federal assistance; bringing their performance in line with national standards.

### 7.1.2 Implement flexible oversight

The new "Performance Partnership" approach to EPA/State agreements will be driven by performance based indicators, relying directly on data summarized from the national databases to evaluate results against state commitments. Efforts are also underway to reward complying facilities by reducing reporting requirements. The absence of credible compliance data will jeopardize this effort.

### 7.1.3 Identify environmental justice communities

The need for national consistency is perhaps best highlighted in the case of environmental justice communities. Minority or low-income communities should not bear a disproportionate share of the adverse environmental consequences resulting from public and private activities. This data provides the knowledge and power which local communities need to protect themselves. Without national data EPA could not identify and address these concerns. For example:

- One EPA Region identified locations with a hazardous waste facility where the average number of people of color and low-income populations are greater than the state average to better target compliance monitoring and assurance efforts.
- EPA is conducting a hazardous waste study to reevaluate sites originally listed in the mid-1980s and is adding new sites, identified by native American tribes, to the cleanup list.

### 7.1.4 National analysis of sectors

EPA identifies candidates for compliance assistance and enforcement based on analyses of national trends in data such as pollutant emissions/releases, compliance, and inspection and enforcement frequency.

## 7.2 EPA provides national environmental information to the public

EPA serves as the focal point for providing environmental information to the public, Congress, and other stakeholders. Data in the national systems allow EPA to serve as a direct source for information on national environmental issues, a service which Congress and the public expect. Seeking this same information on a state-by-state basis would be nearly impossible.

### 7.2.1 Answer information requests and Congressional inquiries

Office of Enforcement and Compliance Assurance receives hundreds of Freedom of Information Act (FOIA) and Congressional requests each year. These requests serve a wide variety of needs for national or multi-state information. For example:

- Public Information Research Group annually requests and publishes a list of all facilities in significant noncompliance, focusing on trends in the quality of the nation's water.
- Environmental companies request lists of permitted facilities for marketing purposes.
- The Sierra Club's Environmental Justice Task Force requested pesticides information to educate their members and the public.
- Environmental compliance information is requested by loan companies, insurance companies, and bond companies to set bond ratings (which determine borrowing interest rates) for municipalities, counties, etc.
- The EPA's Inspector General and the General Accounting Office routinely seek access to our national databases to assess the quality of EPA programs.

### 7.2.2 Provide public access

Much of the compliance and enforcement data is available to the public. One delivery mechanism, the Envirofacts system, which provides data from several national databases is accessed, via the Internet, approximately 100,000 times per month. For detailed descriptions of enforcement data available to the public, refer to section 10.2 of this paper.

### 7.2.3 Analyze trends

- Sound environmental decision making requires that trend data be available to policy makers and others who wish to enter the national debate. Information from national systems is used to establish base lines and then to show results over time. Also, the Science Advisory Board's recent "Futures" report recommends that the Agency spend as much attention to avoiding future problems as to controlling current ones, requiring a broad-based data system. Efforts in this area include:
- The Office of Water is currently tracking reductions in toxins and oxygen demanding pollutants as part of their environmental measures.
- Publication of Toxic Release Inventory data, coupled with the 33-50 Project, has resulted in significant declines in industry's reported emissions.
- OECA annually publishes the Enforcement Accomplishments Report and the State-by-State Enforcement Summary, both of which provide trend data for EPA and State enforcement and compliance activities.

#### 7.2.4 Supply data to other agencies

EPA data is used by other federal agencies for analysis and distribution to the public. For example, publications include NOAA's National Coastal Pollution Discharge Inventory, and the Council on Environmental Quality's Annual Report on Environmental Quality.

#### 7.3 EPA develops approaches to target environmental efforts

Using the national systems, EPA plays a leadership role in developing more effective approaches to direct scarce public resources toward the most critical environmental needs

National data is essential for targeting on an industrial, corporate or media basis. In addition, wide-ranging national data is essential for supporting the objectivity of the Agency's decision making. The national data can be reviewed by all interested parties, helping to prevent an appearance that EPA has acted arbitrarily or on unsupported assumptions.

##### 7.3.1 Conduct case and corporate screening

Compliance/enforcement profiles of historical data are frequently prepared to support enforcement case development or are reviewed prior to government officials interacting with a company:

- Before an enforcement action is taken, two profiles are developed: a cross-media search of Agency compliance and enforcement databases for the specific facility(s) involved in the complaint, and a corporate-wide profile. Both of these profiles require access to EPA's national data systems as well as the Integrated Data for Enforcement Analysis data integration capability.
- Frequently the EPA Administrator's Office requests information from the national systems on the compliance status of various companies that the Administration wishes to interact with for environmental and policy reasons (e.g. the President's Toxic Release Inventory System and budget announcement at the Bethlehem Steel plant in Baltimore). The Administrator needs to know if the company should be praised for its compliance record, or whether they have had significant compliance problems.
- Target Industrial Sectors The FY 1996 MOA proposed national priority sectors were identified after evaluating national toxic pollutant release, compliance and enforcement data from Toxic Recovery Inventory System, AIRS Facility System, PCS and Resource Conservation and Recovery Act Information System. The sectors selected are all significant noncompliers with high TRI releases and a significant trans-Regional impact.

##### 7.3.2 Target corporations

Single media noncompliance at a few facilities in one Region developed into multi-Region, multimedia judicial case after Region VIII requested a national IDEA search for Louisiana Pacific facilities. The data collection took about 30 minutes. This can be contrasted with the development of a corporate profile for Exxon Corporation after the Exxon/Valdez incident: data was collected directly from the Regions and took about four weeks.

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### 7.3.3 Analyze pollutant loadings

Emissions data from AIRS Facility Subsystem and effluent data from PCS can be analyzed to determine ambient effects and for targeting the most significant sources. For example:

- PCS data is being used to analyze pollutant loadings trends in the Great Lakes. Coupled with Permit Compliance System compliance data, this information is supporting a multi-state effort to ensure consistent enforcement for persistent toxic substances under the Great Lakes Enforcement Strategy.

### 7.3.4 Target ecosystems

Integration and analysis of environmental data moves environmental efforts beyond single-media statutory mandates toward ecosystem protection. National system data is being used to:

- Prepare basic background inventories of air, NPDES, and RCRA facilities, as well as TRI release and transfer loadings, for the counties abutting the Mississippi, Missouri and Ohio Rivers;
- Identify sources of nutrients draining into the Gulf of Mexico, causing a 6,000 square mile oxygen depleted "dead zone"; and
- Identify vulnerable national wildlife refuges across the country.

## 7.4 Other uses of EPA's national information systems

### 7.4.1 EPA operates non-delegated environmental programs

National data provides EPA information needed to directly implement federal statutes which are not delegated to states and tribes. Through EPA efforts, citizens in states and tribal lands which do not have the resources, technical expertise, or political will to assume environmental programs will still be protected.

EPA must collect and maintain the information required to operate non-delegated programs across the country and to run programs which are carried out at the federal level. At least for the present, no Region has fully delegated programs within all of its states.

Conduct Non-Delegated Programs EPA's direct implementation responsibilities include for example: environmental programs on most tribal lands; and the wastewater permitting and enforcement (NPDES) program in 12 states.

Fulfill Federal and International Responsibilities EPA has primary responsibility for administration of several federal programs including: many aspects of the toxic chemical regulation program, the pesticide program, tracking potentially responsible parties at hazardous waste sites, and the hazardous waste Import/Export program. National data is also essential for global management including the negotiation of agreements with other countries (e.g. the Great Lakes Agreement with Canada and the NAFTA Agreement with Mexico and Canada).

Support Regulatory Development Accurate national data is essential to support Agency regulatory decision-making and to minimize concerns and criticism resulting from Agency actions.

### 7.4.2 EPA supports state information resource management capacity

EPA's national data systems provide state, local and tribal partners access to the EPA information, and the computing infrastructure, which strengthens their efforts to protect human health and the environment.

States use the national databases as an information reference tool, locating relevant information on other state programs to use in their compliance and enforcement efforts.

Set Permit Limits States review the detailed information on permit limits set by other states for similar industries as they set their own permit limits and as a resource to supplement their own expertise. For example:

- Great Lakes states in three Regions use the national databases to determine pollutant loadings and opportunities to tighten permit limits.

Share Violator Information Nationwide data systems provide compliance information which other states use for targeting their own activities, determining compliance of a facility they are interested in or determining interstate impact. For example

- Many asbestos contractors operate nationwide. The Agency's tracking system is available to communities or school boards to aid in contractor selection. States also use the systems to target contractor inspections.

## **8 NEED FOR AUTOMATED NATIONAL SYSTEMS**

### **8.1 Efficiency**

EPA's national data systems provides delegated states with access to a computer application specifically designed for environmental program management. Replicating these services across 50 states would be both inefficient and very expensive. Similarly, maintaining separate systems on several different platforms (the inevitable result of Regional systems) is both inefficient and more costly than a central national system.

Provide Computer Applications: For example, approximately 27 NPDES delegated states use the Permit Compliance Systems (PCS) as their primary data system and 35 delegated states use the air system (AFS) for managing their programs.

Support Computing Capability: Through the national systems, States have direct access to the national application, the computing power of EPA's computer hardware (mainframe and LANs), user support services, training and ongoing system O&M and development. Even states without expensive, state-of-the-art desktops can access these systems.

Supply Consistent System Modifications As revisions to the national laws are enacted or new programmatic initiatives are undertaken the national systems are updated and, in turn, state programs are kept current and consistent. For example:

- Revisions were made to PCS to track new Clean Water Act requirements for the stormwater, sludge, pretreatment and Combined Sewer Overflow (CSO) programs which are then used by the states.
- If the national systems did not provide this service to the states, some states would increase their budgets to modify their systems while others would delay and ultimately fail to update their systems.

Develop Efficient Data Transfer Methods The centralized communications infrastructure of the National Computing Center (NCC) provides opportunities for developing innovative data exchange methods to reduce the burden associated with collecting and reporting data.

- For example, EPA is in the process of developing Electronic Data Interchange (EDI) technology for submission of Discharge Monitoring Reports into Permit Compliance System (PCS) which will increase data quality and reduce costs for both states and the regulated community.

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Manage Data for Non-Delegated Programs The national systems provide the data storage and retrieval mechanism necessary to carry out EPA's direct implementation responsibilities.

Manage Data for Federal/International Programs EPA has primary responsibility for several systems which support administration of federal programs including: Section Seven Tracking System (SSTS)/PRES/ LISA/NCDB for Toxic Substance Control Act (TSCA), Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and Emergency Planning and Community Right Act (EPCRA) requirements; Site Enforcement Tracking System (SETS) for potentially responsible parties for Comprehensive Environmental Response Compensation and Liability Act (CERCLA) sites; and Import/Export to track hazardous waste transported across U.S. borders.

## 8.2 Provides structure to data

The existence of national databases imposes an overall structure on the environmental data collected. This structure facilitates consistent data collection and interpretation.

Consistent Data Collection: Definitions are developed for nationally reported data elements (such as significant noncompliance). Lacking these definitions make comparisons among states difficult if not meaningless. Additionally, through the national systems a minimum set of data elements is established which is critical for complete comparisons.

Consistent Data Interpretation Standardized reports with standardized selection criteria help to make valid comparisons of the data (e.g. the quarterly noncompliance report). These reports are available to all users in an easily accessible and consistent format.

## 8.3 Timeliness of analyses and responses

National systems are the most efficient way to provide timely responses to requests for information.

Provide Prompt Responses The Freedom of Information Act requires EPA to respond to requests within 10 calendar days. Congressional requests must sometimes be answered that same day to influence committee or floor debate.

Decrease State/Regional Reporting : Contacting each state or region to provide information from their systems would not only increase processing time substantially, but would also add a significant reporting workload to state and regional staff (i.e. 50 different states providing answers instead of a single computer retrieval).

## 8.4 Relationships with other databases

The automated national systems provide access to the data in a format which allows regular data updates to systems such as Integrated Data Enforcement Analysis (IDEA) which integrates data from many separate systems and creation of data sets which support other Agency targeting tools.

Support Data Integration Efforts Enforcement and compliance data from 11 of EPA's national databases are accessed by Integrated Data Enforcement Analysis (IDEA), allowing data analysis across media on multiple targeting scenarios. Demographic data and risk based models are also being added to the system so that users can better evaluate queries. Over Office of Environmental Compliance Assurance's (OECA) first year, someone started an Integrated Data Enforcement Analysis (IDEA) session every 27 working minutes. This system provided a report, handled a query or produced an analysis every 9 minutes.

## **9 ROLE AND RELATIONSHIP OF STATE SYSTEMS TO NATIONAL SYSTEMS**

As discussed, most environmental programs are largely implemented by State agencies rather than directly by EPA. And, in many cases, the scope of State programs go beyond and may be more stringent than is required under national laws. This decentralized, flexible regulatory approach poses a challenge in terms of maintaining and developing national databases. Two basic options are available: national systems can be developed as tools for States and a subset of information is used for national reporting; or national systems can be developed solely to support national reporting.

EPA has had experience with both of these models and has encountered significant difficulties in terms of ensuring that complete and accurate data is entered into the national systems. Our basic finding is that in order to have reasonable data quality, the users of the system must perceive a benefit. The criticism leveled at some systems is that the State and/or Regions are required to "feed the monster" but do not receive any benefit once the data is entered; that the system is not useful in managing their activities. Where systems have been developed that are perceived as useful and that are actually used in implementing programs, poor data quality and missing data do not appear to be significant issues.

## **10 PUBLIC ACCESS TO EPA'S ENFORCEMENT DATABASES**

### **10.1 EPA's approach to public access**

In general, there are two approaches to accessing EPA data; through the Freedom of Information Act process and through assorted avenues EPA has voluntarily chosen to make information available.

#### **10.1.1 Freedom of Information Act (FOIA) process**

EPA is required by law under the Freedom of Information Act to provide information requested by the public within 10 days of receipt of the request. This law covers written documents as well as data contained in EPA's databases. The law provides that EPA is not be required to create new materials in order to satisfy the request. For enforcement data in national systems, however, EPA has taken the approach that it is appropriate to generate reports and queries from the databases that are specific to the requester's needs. This information can be requested from EPA on hard copy, but is most usually provided on magnetic tape or on 3.5" computer disks. In some cases where the database is small, a requester can receive a copy of an entire database, but more often, specific types of data regarding a geographic area or specific type of facility is requested. One of the limitations to using the FOIA process is that the requester must understand what specific information to request. If the requester finds the information is not sufficient, he or she must go through the process again, and write to EPA to request the additional information.

#### **10.1.2 Publicly accessible information**

A great deal of EPA's compliance and enforcement data is currently available to the public through a variety of mechanisms. EPA has not taken a consistent approach to public access and as a result, each program office has historically chosen what data to make available and through what delivery mechanisms. These include making hard copies of summary data available through public information centers, relying solely on Freedom of Information Act requests, granting access directly to the databases, and most recently, making information available through the Internet.

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Of the major enforcement databases, the following are available to the public:

- Enforcement Docket (Federal judicial and administrative enforcement cases) is available electronically from the National Technical Information Service (NTIS can be reached by phone on 703-487-4650).
- Permit Compliance System (wastewater permitting and enforcement program) is available electronically from this information service including on-line access.
- Site Enforcement Tracking System (Superfund potentially responsible parties notified under Comprehensive Environmental Response Compensation Liability Act (CERCLA) is available from the service on tape, disk or CD ROM.
- Resource Conservation Recovery Act (RCRA) (hazardous waste) system is available through these reports and reports are available on the Internet.

Some database managers at EPA were originally reluctant to release information to the public because they believed the data quality was not sufficiently high and the data contained errors. In the case of compliance and enforcement data, database errors can mistakenly represent facilities as being in violation when they are in fact, in compliance. While the data in the databases unquestionably does contain some errors, EPA's current approach is to make the data widely available to promote improvements to data quality. It is our belief that if the public and the regulated facilities begin to use the data and to do analyses, they will find errors and that this process will lead to an increase in data quality.

The Agency's experience with the release of Toxic Release Inventory (TRI) data has shown that the public is very interested in environmental data. Simply releasing this inventory data has resulted in facilities voluntarily decreasing emissions. EPA believes that making compliance data available may result in both greater community involvement in compliance monitoring and voluntary compliance by regulated facilities.

While this approach sounds simple, the decentralized regulatory setting makes releasing national data a more complicated matter. The States are the primary source of the data in the national systems and in fact, the States do most of the data entry. However, once the data is in the national systems, accountability for data quality seems to be diffused. For example, a public interest group recently requested a national list of significant violators under the wastewater program. The group planned to and eventually released a report which received national and regional media attention. EPA alerted its Regions and the States to the request so that they could correct any data entry errors prior to the generation of the list. When the report was released to the national press and some facilities complained that they had wrongfully been listed as having been a significant violator, several States disavowed any responsibility and claimed the information had "all come from Headquarters".

## 10.2 Description and availability of specific EPA enforcement databases

EPA has chosen to focus public access activity on making information from its Integrated Data for Enforcement Analysis system (IDEA). This system is EPA's tool to integrate compliance and enforcement data from key Agency systems. It contains data on State and Federal compliance and enforcement activities under the wastewater, air, hazardous waste, emergency response, pesticides, and toxics programs. These systems are described below. On-line public access to this system will be available beginning in Spring of 1996 through the National Technical Information Service (NTIS). This service will establish a billable account for users to access this system on

EPA's mainframe. Documentation will also be available from the information service. Information on this system and instructions concerning gaining access will also be available on the Internet through EPA's homepage. EPA's long-term public access strategy includes implementing a toll-free telephone number for information about this system, a simplified graphical interface available on the Internet and an on-line Windows-based version for public access.

IDEA contains information from the following databases:

- **Aerometric Information Retrieval System (AIRS) Facility Subsystem - AFS** contains emission, compliance and permit data for major stationary sources of air pollution.
- **CERCLIS** - Contains information on compliance and enforcement activities at Superfund sites under the Comprehensive Environmental Response, Compensation and Liability Act.
- **Enforcement Docket** - Tracks EPA civil judicial and administrative enforcement actions including violations, defendants, penalty information.
- **Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)/Toxic Substance Control Act (TSCA) Tracking System - FTTS** tracks compliance with FIFRA, TSCA and Emergency Preparedness and Community Right to Know Act (EPCRA) EPCRA inspections, enforcement actions and settlement terms. Uploaded to a national database called NCDB. (FIFRA is the Federal Insecticide, Fungicide and Rodenticide Act, TSCA is the Toxic Substances Control Act.)
- **Permit Compliance System - PCS** contains permit and compliance and enforcement information on all major wastewater dischargers (facilities with greater than 1 million gallons per day of flow or that pose a significant risk to a water body) and many minor facilities.
- **Resource Conservation Recovery Information System - RCRIS** tracks activities related to facilities which generate, transport, treat, store or dispose of hazardous waste including permit notification, compliance, inspection and corrective action activities.
- **Site Enforcement Tracking System - SETS** contains information on Potentially Responsible Parties notified under the Comprehensive Environmental Response, Compensation and Liability Act (Superfund).

U.S. Environmental Protection Agency  
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Summary Report

Number of Facilities Selected by Region and Program

PRG	I	II	III	IV	V	VI	VII	VIII	IX	X	TOTAL
AFS	8	3	3	14	25	4	0	1	0	14	72
CER	2	2	2	5	6	4	0	0	0	9	30
DCK	3	3	1	4	13	1	0	0	0	9	34
DUN	4	2	4	11	27	7	2	1	1	16	77
FFI	0	0	0	0	0	0	0	0	0	0	0
FIN	10	4	3	16	36	8	1	1	1	17	97
LST	0	0	0	0	0	0	0	0	0	0	0
HCD	3	3	0	7	4	2	1	0	0	15	35
PCS	7	4	2	11	33	6	1	0	1	17	82
RCR	10	4	3	14	29	6	1	1	1	17	86
SET	0	0	0	0	1	0	0	0	0	0	1
TRI	8	3	3	14	27	6	1	1	0	17	80

Compliance Status of Facilities by Program

	AFS	RCR	PCS	All Three
Facs in Compliance	36 ( 50%)	61 ( 71%)	25 ( 30%)	0 ( 0%)
+ Facs Not in Compliance	36 ( 50%)	25 ( 29%)	57 ( 70%)	1 ( ??)
= Total Number of Facs	72	86	82	53

Number of Enforcement Actions by Program

Year	AFS		RCR		PCS		CER				
	NOV/NONS	Admin	Judic	NOV/NONS	Admin	Judic	NOV/NONS	Admin	Judic		
1992	41	16	2	13	5	1	3	31	4	0	0
1993	22	12	4	8	2	0	4	14	1	0	0
1994	41	17	5	7	6	3	2	18	2	0	0
1995	2	0	0	1	0	0	0	1	0	0	0

Number of Open Civil Docket Cases = 4

Summary of SIC Codes by Region

SIC	I	II	III	IV	V	VI	VII	VIII	IX	X	Totals	Parameter Description
0	2	1	1	2	10	1	0	0	0	6	23	Not in SIC Table
2087	0	0	0	0	0	0	0	0	0	1	1	FLAV EXTR & FLAV SYRUPS, NEC
2261	1	0	0	0	0	0	0	0	0	1	2	FINISH OF BRD MOV FAB OF COTTON
2297	1	0	0	0	0	0	0	0	0	0	1	NONWOVEN FABRICS
2411	0	0	0	0	0	0	0	0	0	2	2	LOGGING CAMPS/LOGGING CONTRACT
2421	0	0	0	1	0	0	0	0	0	3	4	SAWMILLS & PLANING MILLS, GEN
2429	0	0	0	0	0	0	0	0	0	2	2	SPECIAL PRODUCT SAWMILLS NEC
2436	0	0	0	0	0	0	0	0	0	0	0	SOUTHWOOD VENEER AND PLYWOOD
2491	0	0	0	0	0	0	0	0	0	0	0	WOOD PRESERVING
2493	0	0	0	1	0	0	0	0	0	1	2	RECONSTITUTED WOOD PRODUCTS

Table 1

Table 2

0. 94  
PUS507  
GRAND  
SUMMARY

SAFE DRINKING WATER INFORMATION SYSTEM  
FACILITIES AND POPULATION SERVED BY PRIMARY WATER SUPPLY SOURCE  
TEST OF AN 07 REPORT - EPA REGION VIII COMMUNITY ACTIVE SYSTEMS IN THE CURRENT INVENTORY

POPULATION	---SURFACE---		---GROUND---		---GRND-LDI---		---SURFACE---		---PURCHASED---		---GRND-LDI---		---TOTAL---	
	FAC	POP (000)	FAC	POP (000)	FAC	POP (000)	FAC	POP (%)	FAC	POP (000)	FAC	POP (000)	FAC	POP (000)
Under 101														
NUMBER	47	3	931	56	0	0	116	3	37	2	0	0	1,131	65
PERCENTAGE	1.5	.0	29.7	.7	.0	.0	3.7	.0	1.2	.0	.0	.0	36.0	.8
101-500														
NUMBER	70	22	836	205	0	0	108	29	59	16	0	0	1,073	271
PERCENTAGE	2.2	.3	26.6	2.4	.0	.0	3.4	.3	1.9	.2	.0	.0	34.2	3.2
501-1,000														
NUMBER	42	34	206	153	0	0	38	30	20	13	0	0	306	229
PERCENTAGE	1.3	.4	6.6	1.8	.0	.0	1.2	.3	.6	.2	.0	.0	9.7	2.7
1,001-2,500														
NUMBER	76	124	192	305	0	0	30	52	8	13	0	0	306	494
PERCENTAGE	2.4	1.5	6.1	3.6	.0	.0	1.0	.6	.3	.2	.0	.0	9.7	5.8
2,501-3,300														
NUMBER	15	45	38	111	0	0	3	9	1	3	0	0	57	167
PERCENTAGE	.5	.5	1.2	1.3	.0	.0	.1	.1	.0	.0	.0	.0	1.8	2.0
3,301-5,000														
NUMBER	18	74	37	154	0	0	11	48	0	0	0	0	66	276
PERCENTAGE	.6	.9	1.2	1.8	.0	.0	.4	.6	.0	.0	.0	.0	2.1	3.2
5,001-10,000														
NUMBER	32	245	30	210	0	0	22	169	0	0	0	0	84	624
PERCENTAGE	1.0	2.9	1.0	2.5	.0	.0	.7	2.0	.0	.0	.0	.0	2.7	7.3
10,001-50,000														
NUMBER	37	835	25	405	0	0	26	531	0	0	0	0	88	1,771
PERCENTAGE	1.2	9.8	.8	4.7	.0	.0	.8	6.2	.0	.0	.0	.0	2.8	20.8
50,001-75,000														
NUMBER	9	558	1	55	0	0	1	65	0	0	0	0	11	678
PERCENTAGE	.3	6.5	.0	.6	.0	.0	.0	.8	.0	.0	.0	.0	.4	7.9
75,001-100,000														
NUMBER	5	441	1	86	0	0	2	168	0	0	0	0	8	696
PERCENTAGE	.2	5.2	.0	1.0	.0	.0	.1	2.0	.0	.0	.0	.0	.3	8.2
Over 100,000														
NUMBER	8	3,036	1	225	0	0	0	0	0	0	0	0	9	3,261
PERCENTAGE	.3	35.6	.0	2.6	.0	.0	.0	.0	.0	.0	.0	.0	.3	38.2
TOTALS														
NUMBER	359	5,416	2,298	1,964	0	0	357	1,104	125	47	0	0	3,139	8,531
PERCENTAGE	11.4	63.5	73.2	23.0	.0	.0	11.4	12.9	4.0	.6	.0	.0	100.0	100.0



03/14/95

ANNUAL REPORTS FOR SEL CT STATE: AR  
FOR 1993

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GENERATOR I.D. NO.: ARD091691261 YEAR OF REPORT: 93  
 GENERATOR NAME : ARKANSAS STEEL ASSOCIATES  
 ADDRESS : 2803 VAN DYKE ROAD  
 : NEWPORT, AR 72112  
 :

TRANSPORTER 1 I.D. NO.: MOD006968101 TRANSPORTER 1 NAME: MISSOURI PACIFIC RAILWAY CO.  
 TRANSPORTER 2 I.D. NO.: TRANSPORTER 2 NAME:  
 CONSIGNEE I.D. NO. : NC0000000001 CONSIGNEE NAME : ZINC NACIONAL SA

WASTE NO. : 1  
 WASTE DESCRIPTION: FLUE DUST, IRON OR STEEL CONTAINING ZINC  
 EPA WASTE NO. : K061 DOT HAZARD CLASS : 9  
 QUANTITY : 3,591,800.00 P  
 NO. OF SHIPMENTS : 20

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GENERATOR I.D. NO.: ARD075656454 YEAR OF REPORT: 93  
 GENERATOR NAME : GNB INCORPORATED  
 ADDRESS : 4115 SOUTH ZERO STREET  
 : FORT SMITH, AR 72903  
 :

TRANSPORTER 1 I.D. NO.: NJ0054126164 TRANSPORTER 1 NAME: FREEHOLD CARTAGE, INC.  
 TRANSPORTER 2 I.D. NO.: TRANSPORTER 2 NAME:  
 CONSIGNEE I.D. NO. : NC0000000034 CONSIGNEE NAME : NOVA PB INC.

WASTE NO. : 1  
 WASTE DESCRIPTION: LEAD BEARING MATERIALS F/BATTERY MFG  
 EPA WASTE NO. : D008 DOT HAZARD CLASS : 9  
 QUANTITY : 344,267.00 P  
 NO. OF SHIPMENTS : 9

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MISSOURI MAJOR FACILITIES . . . . .ED DURING FISCAL YEAR 1985

PERMIT NUMBER	FACILITY NAME SHORT	INSP DT	TYP INSP	INSP CD
MO0001171	AECI NEW MADRID POWER PLT	10/23/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0097675	AECI THOMAS HILL POWER PLT	12/05/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0002003	AMAX LEAD CO-BUICK MINE/MILL	04/23/85	COMPLIANCE SAMPLING	STATE
MO0002003	AMAX LEAD CO-BUICK MINE/MILL	05/15/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0002003	AMAX LEAD CO-BUICK MINE/MILL	08/14/85	COMPLIANCE SAMPLING	STATE
MO0006337	AMAX LEAD CO-BUICK SMELTER	01/29/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0001716	AMERICAN CYANAMID CO	11/29/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0004774	AMOCO OIL CO-SUGAR CREEK FAC	06/28/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0004952	ARMCO, INC	05/30/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0100210	ASARCO-WEST FORK MINE & MILL	08/14/85	COMPLIANCE SAMPLING	STATE
MO0001121	ASARCO, INC (BLOVER SMELTER)	11/16/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0001121	ASARCO, INC (BLOVER SMELTER)	09/16/85	COMPLIANCE SAMPLING	STATE
MO0002453	ATLAS PLANT	10/17/84	COMPLIANCE SAMPLING	STATE
MO0028886	BLUE SPRINGS CITY-SMI-A-BAR	10/23/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0028886	BLUE SPRINGS CITY-SMI-A-BAR	08/06/85	COMPLIANCE SAMPLING	STATE
MO0025241	BRANSON CITY OF MTF	04/03/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0022861	CAMPBELL CITY OF MTF	10/16/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0022861	CAMPBELL CITY OF MTF	12/12/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0050500	CAPE GIRARDEAU CITY OF MTF	03/20/85	COMPLIANCE SAMPLING	STATE
MO0096710	CARROLLTON CITY OF MTF	12/11/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0096710	CARROLLTON CITY OF MTF	12/20/84	COMPLIANCE SAMPLING	STATE
MO0096310	CARROLLTON CITY OF MTF	04/18/85	COMPLIANCE SAMPLING	STATE
MO0039136	CARTHAGE CITY OF MTF	02/21/85	COMPLIANCE SAMPLING	STATE
MO0039136	CARTHAGE CITY OF MTF	04/08/85	COMPLIANCE SAMPLING	STATE
MO0095020	CARTHAGE CITY OF MTF	04/08/85	COMPLIANCE SAMPLING	STATE
MO0022977	CARUTHERSVILLE CITY OF - STP	03/22/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0022977	CHILLICOTHE CITY OF MTF	11/29/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0022977	CHILLICOTHE CITY OF MTF	03/21/85	COMPLIANCE SAMPLING	STATE
MO0000167	CHRYSLER CORP-ST LOUIS PLT 1&2	04/25/85	COMPLIANCE SAMPLING	STATE
MO0001961	CITY OF SPRINGFIELD JAMES RIV	06/12/85	COMPLIANCE SAMPLING	STATE
MO0004090	CITY OF ST JOSEPH LAKE RD PLT	05/22/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0097837	COLUMBIA CITY OF REGIONAL MTF	05/10/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0001872	COMINCO AMERICAN	05/15/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0001872	COMINCO AMERICAN	08/14/85	COMPLIANCE SAMPLING	STATE
MO0026662	DE SOTO CITY OF MTF	03/26/85	COMPLIANCE SAMPLING	STATE
MO0085472	DIAKETT CREEK SEWAGE TR PLANT	09/18/85	COMPLIANCE SAMPLING	STATE
MO0002340	EAGLE PICHER INDUSTRIES INC	02/22/85	COMPLIANCE SAMPLING	STATE
MO0040002	EL MORADO SPRINGS CITY OF MTF	02/19/85	COMPLIANCE SAMPLING	STATE
MO0040002	EL MORADO SPRINGS CITY OF MTF	08/08/85	COMPLIANCE SAMPLING	STATE
MO0039659	EUREKA CITY OF STP	10/19/84	COMPLIANCE SAMPLING	STATE
MO0039659	EUREKA CITY OF STP	09/10/85	COMPLIANCE SAMPLING	STATE
MO0028843	EXCELSIOR SPRG CITY OF MTF	10/30/84	COMPLIANCE EVAL (NON-SAMPLING)	EPA (REGIONAL)
MO0028843	EXCELSIOR SPRG CITY OF MTF	11/14/84	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0001091	FASCO INDUST OZARK MOTOR PLT	01/08/85	COMPLIANCE SAMPLING	STATE
MO0000632	FESTUS-CRYSTAL CITY OF STP	04/17/85	COMPLIANCE SAMPLING	STATE
MO0001871	FRANK R HILLIKEN MINE & MILL	05/14/85	COMPLIANCE EVAL (NON-SAMPLING)	STATE
MO0001871	FRANK R HILLIKEN MINE & MILL	08/12/85	COMPLIANCE SAMPLING	STATE
MO0046710	FULTON CITY OF STINSON CREEK	10/03/84	COMPLIANCE SAMPLING	STATE
MO0046710	FULTON CITY OF STINSON CREEK	10/04/84	COMPLIANCE SAMPLING	STATE

Table 5

01/17/95  
HTISII

QUICK LOOK REPORT  
CONSOLIDATED DOCKET ENFORCEMENT SYSTEM  
ALL CIVIL FILED CASES - PART I - FOIA  
SORTED BY CASE NAME

CASE NUMBER	CASE NAME	LAWS ALL	SECTION ALL	VIDTYP ALL	POLLUTANT ALL	CIV FILED COURT	CIV CONCL	FINAL ASSESSED FEDERAL PENALTY	FINAL COST RECOV AWARDED	R S L T
08-85-0011	A & C SALVAGE_(NILES WD	TSCA	2615			9/10/85	11/21/85	2,400		LP
05-80-0039	A & F MATERIALS ET AL	CERCLA RCRA	106 7003			9/30/80	2/14/83		61,000	CR
05-80-0089	A & F MATERIAL CD.(GREE	CERCLA RCRA CWA CWA	106 107 7003 309 311	SPILL	PCB, VOLATILE ORGANICS, METALS	9/03/80	10/10/89	5,000		CP
02-87-0501	A & S MANUFACTURING CD	CAA	110	SIP	VOC	5/16/88	9/13/89	80,000		CP
08-84-0024	A J MACKAY COMPANY	CAA	112	NESHAP	ASB	10/22/85	6/13/86	50,000		CP
10-77-0001	A W LGGING ET AL	CWA	309			11/06/77	4/04/78	17,500		CP
07-85-0019	A. A. MACTAL CO. AND KA	CAA	112	NESHAP	ASBESTOS	8/22/89	3/10/93	126,000		CP
06-92-0198	A. P. GREEN INDUSTRIES, CWA	CWA	301	NOPRMT	OIL & GREASE IRON MAGNESIUM MANGANESE SILICA COO BOD TOC TSS AMMONIA	9/07/93	3/10/94	450,000		CP
02-78-0005	A. W. CROSS	CAA	111			1/16/79	4/08/80	12,000		CP
03-78-0028	A.B. CHANCE COMPANY	CWA	402			3/17/80	5/19/80	6,000		CP
08-90-0103	A.B. HIRSCHFELD PRESS I	CAA	114	ADVIOL	ORGANIC COMPOUNDS	4/08/91	4/08/91	5,500		CP
03-82-0010	A.H.-R.S. COAL CORP - B	CERCLA	107	DSP REP	MERCURY LEAD CYANIDE COPPER CHROMIUM CADMIUM BERYLIUM SULFURIC ACID SULFONATES CAUSTICS	12/20/83	5/23/88			DC
04-84-0013	A.L. TAYLOR SITE/VALLEY	CERCLA CWA CERCLA	107 311 104A	SPILL		4/11/86	10/30/91		1,254,000	CR
05-86-0171	A.M. GENERAL	CAA	PART D	NSR	VOC	6/30/87				
05-90-0109	A.N. REITZLOFF CO. (LDI	CERCLA CERCLA	107A 1226			5/21/90	8/30/90	1,110,000		CP

Table 6

U.S. ENVIRONMENTAL PROTECTION AGENCY  
 INTEGRATED DATA FACILITY-SPECIFIC COMPLIANCE PROFILE REPORT 1A

03/08/95

FINDS Id: AK0009252487 Fac. Name: ALASKA PULP CORPORATION SITKA City: SITKA State: AK  
 Address: 4600 SAWMILL CREEK RD Zip: 99835 Lat: 57.049 Long: 135.297

RCRIS Handler Id:	Year	No. Eval.	No. NOVs	No. AAs	No. JAs
AKD009252487					
Name: ALASKA PULP CORP SITKA MILL	CY92	1	1	0	0
TSD Facility Status: HPV? NO	CY93	1	0	0	0
Owner Operator Type: P Exist. Date: 1959/11	CY94	0	0	1	0

PCS Permit No:	Issue Date:	Year	All Viols	Eff. Viols	Inspections	No. NOVs	No. AAs	No. JAs
AK0000531	1985/04							
Fac. Name: ALASKA PULP CORP		CY92	0	0	1	0	0	0
Active Major Discharger		CY93	2	1	1	0	0	0
Expired Date: 1990/05		CY94	1	0	0	0	0	0

PCS Permit No:	Issue Date:	Year	All Viols	Eff. Viols	Inspections	No. NOVs	No. AAs	No. JAs
AK0049573	1990/03							
Fac. Name: ALASKA PULP CORP		CY92	0	0	0	0	0	0
Active Minor Discharger		CY93	0	0	0	0	0	0
Expired Date: 1995/04		CY94	0	0	0	0	0	0

CERCLIS Site Name:	Cal Year	1991	1992	1993	1994
ALASKA PULP CORP					
NPL Status: N	No. Admin. Actions:	0	0	0	0
Site Classification: ND	No. Judic. Actions:	0	0	0	0

Civil Docket	Case Name	Case Number	Type	Case Law	Overall Sta.	Initiated	To DOJ	Filed	Concluded
	AK LUMBER-PULP CO	10-74-0001	CIV	CHA	CASE CLOSED	1974/06	1976/05	1976/05	1976/05
	ALASKA PULP CORP - CIC	10-85-0001	CIC	CHA	CASE CLOSED	1985/03	1985/03		1985/07
	ALASKA PULP CORP	10-86-0008	CIV	CHA	CONCLUDED	1986/04	1986/05	1986/06	1986/09



## SPECIAL TOPIC WORKSHOP B

### Strategic Targeting for Enforcement

Papers and Workshop B discussions address the following issues:

- Methods developed to target enforcement resources, such as inspections and enforcement response.
- How these methods have been applied in practice.
- Criteria used for targeting.
- Success and benefits demonstrated from the application of targeting methods in comparison to the alternatives. For example, whether targeting results in greater ability to detect significant violations or significant environmental problems and to send a clear signal to the regulated community.

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1. Summary of Strategic Targeting Workshop, <i>Facilitators: C. Currie, K. Prosser, Rapporteurs: C. Cocault, K. DeMoors</i> .....	319
2. Strategic Targeting for Compliance and Enforcement <i>R.F. Duffy</i> .....	325

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See related papers in Theme 6, Workshop I: Criminal Enforcement.

1. Planning and Executing Strategic Environmental Enforcement Initiatives: Maximizing Enforcement Impact, *R. van Heuvelen, P.J. Fontaine*, Volume I, Oaxaca, México
2. The Great Lakes Enforcement Strategy: Using Enforcement Resources to Maximize Risk Reduction and Reduction and Environmental Restoration in the Great Lakes Basin, *L. Peterson*, Volume 1, Oaxaca, México



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## STRATEGIC TARGETING FOR ENFORCEMENT

Facilitators: Chris Currie, Kathy Prosser  
Rapporteurs: Clare Cocault, Karin DeMoors

### GOALS

The session addressed the following issues:

- What methods exist or can be developed to target enforcement resources, such as inspections and enforcement response?
- How have these methods been applied in practice?
- What criteria are used for targeting?
- What are the successes and benefits demonstrated from the application of targeting methods in comparison to the alternatives?

## 1 INTRODUCTION

More than twenty participants discussed, in two separate workshops, strategic targeting for environmental enforcement. Participants represented countries with a broad range of existing environmental enforcement programs, including a few who had strategic targeting plans and many who were interested in developing these plans.

## 2 PAPERS

One paper prepared for the workshop by Richard Duffy reviews the history of the United States Environmental Protection Agency's efforts to target its resources at sources of environmental pollution over twenty years of implementation. It describes criteria used for strategic targeting, data and analysis performed to identify strategic targets, management systems used to communicate and manage targets, and the results of those efforts. Recent data and information system improvements better support targeting on a geographic, industry and pollutant basis as well as for specific types of violations. Targeting is used to manage a decentralized organization within the U.S.

## 3 DISCUSSION SUMMARY

### 3.1 What are the reasons for strategic targeting?

Some of the driving forces for strategic targeting identified by the workshop participants include:

- Public perception and the media.
- Political agendas.

- Desire of an agency to get more results out of their resources.
- Insufficient resources to do the job and the need to use them wisely.
- Need for intelligence capability.
- Desire to stress enforcement within a decentralized organization in which one must get others to enforce laws and establish compliance as a priority.
- Desire to be less fragmented and adopt a more integrated pollution control regimen.
- Desire to protect and manage certain natural resources.

### 3.2 What is strategic targeting?

Following a review of country legal and organizational frameworks and approaches for achieving compliance, participants defined "strategic" and "target". "Strategic" entails intentional direction, one in which interactions happen in a consistent manner, focused in a particular direction. A "target" is the focus on activity and resources believed to have the biggest impact and for which to develop a strategy to achieve compliance.

### 3.3 What activities require strategic targeting?

Most of this discussion did not specifically address strategic targeting, but rather was a general overview of what the participants' countries did by way of environmental compliance and enforcement program implementation.

All of the participants stated that they operated under laws or rules of a government or agency that ultimately lead to enforcement if a facility is out of compliance. These laws or rules establish regulatory tools, such as permits, that have limits and standards for pollutant emissions. Enforcement tools include inspections, self-monitoring and reporting, citizen complaints and company involvement.

Grades of enforcement allow government agencies to target their resources. Generally, a warning or notice is given to a violating facility stating that they must comply with regulations. The next step taken if the violating facility does not respond is to issue a violation notice. This notice is normally a formal document with penalties attached. If the facility still does not comply then one or more of the following actions are taken: 1) the permit is withdrawn; 2) the facility is shutdown; 3) civil and administrative procedures are taken; or 4) criminal charges are imposed. Some countries such as Jamaica can require a company to submit a management plan and rapid response plan in response to violations to ensure company involvement in resolving non-compliance.

Participants also identified "carrots" such as education, information, tax incentives, prevention, awards, grants and loans, technical assistance, negotiation and the like. It is important that the tax payer not subsidize polluters in any such scheme. In all cases, it was deemed essential by all participants that actions be documented, timely and communicated ahead of time and as follow up to the community, all geared toward the compliance goal.

The level or levels of government that are responsible for establishing and employing enforcement tools varied among countries. In some cases one level of government, either the locality, state/province, or federal, was responsible for the enforcement of all regulations on a particular facility, while in other cases many levels of government had power over a facility.

It was noted that the severity of the violation determines the level of enforcement taken. For instance, if the action is severe, some participants stated that in their country the facility would be shutdown without a warning or notice. However, it was also noted that if the violating facility provides a public service such as sewage treatment then it is impractical to take such action.

### 3.4 How to start being strategic?

First set priorities, indicating where to spend resources and second analyze the program results to see if it is effective. Programs need plans so they are not just reacting. It is important to focus on health and safety as well as public complaints. The strategic plan addresses:

- What are the problems?
- Why are the problems?
- Where are the problems?
- Who is causing the problems?
- Whether there are means (e.g. technology) to be effective.
- Verification: How do you know?
  - citizen input through the media and politicians
  - monitoring results
  - NGOs
  - health authorities
  - ambient monitoring

The need to then shift resources according to priorities is important; use the full range of carrot and stick compliance and enforcement tools to achieve results in a timely manner.

### 3.5 Garnering public support for agency priority setting

Participants discussed issues related to public perception and the fact that the public may not perceive the same priorities as does the responsible governmental organization. While sometimes difficult, participants viewed informing the public to be very important, particularly when, for example, a small plant they see as important may not be viewed by an agency as important in comparison to larger plants - or vice versa. To do this successfully, an enforcement agency needs a tradition of credibility so that when the government makes decisions, they will be trusted. Some countries hold public/private pollution forums to ensure the public understands the problems and it is very helpful when companies establish and implement community plans to establish credibility.

Despite any such efforts to establish and communicate priorities, community and press concerns on a local basis, while not strategic, is important to respond to and difficult to plan. Some countries have established ombudsmen for the environment to serve as a buffer for the agency but ensure they are trusted to look into citizen complaints.

### 3.6 What criteria are used for targeting?

The target was defined as the area in which an enforcement tool or program can have the most impact. A strategy can be formed that combines these targets enabling the enforcement program to reach the highest level of compliance with limited resources. A strategy is composed of priorities and an analysis of whether the strategy is effective.

Criteria named that are used for targeting include:

- The compliance history of the industry or particular facility.
- Experiences in other countries (e.g. use of cyanide in gold mining or denying permit based upon other country experience).
- Political agenda and issues coming up.
- Public concern.

- Urgency of the problem.
- Quantities of pollutants.
- Geography.
- Topography.
- Specific pollutants.

In several instances, information on compliance history within a community, or outside a community or country has been used successfully to bar a company from obtaining new permits.

**3.7** What are the successes and benefits demonstrated from the application of targeting methods in comparison to the alternatives?

The utilization of targeting methods primarily allows the agency enforcing environmental rules and laws to stretch limited resources enabling the most efficient use of funds, resources, and labor.

Targeting also establishes credibility for the enforcement agency. If a public example is made of a polluter then the agency is seen as powerful and penalties are real. Other benefits include the increased likelihood of receiving funding since the agency is perceived as efficient and fair. Improved staff moral is also a benefit of targeting. When staff is given a target to focus on and have success a feeling of accomplishment exists.

The final and most important benefit of strategic targeting is improved compliance rates and more sustainable development.

In Armenia, mobilization of the public enabled the authorities to combat illegal forestry cutting, a strategic focus and means of gaining this public support. Chile, when faced with bakeries in residential areas where pollution from them was a problem held discussions with bakery associations, sent letters to all members of the associations, gained assistance from municipal authorities and conducted outreach to the press to promote compliance. In the USA, one example provided was when small but numerous sources of air pollution in areas exceeding national air quality standards were the source of integrated compliance promotion, assistance and enforcement strategies.

## **4 CONCLUSIONS**

Strategic targeting plans are an essential component of any environmental agency's enforcement program. These plans will allow the agency to focus limited resources and have the largest impact on improving compliance. While it is not possible to control all factors that influence the choice of targets, it is possible to establish priorities and shift the majority of resources accordingly.

Several observations were made by participants in the workshop about strategic targeting:

1. Strategic priority setting requires discussion with others, both within the agency and ministry as well as with other ministries, and with the public.
2. Strategic targeting requires an overall framework (e.g. national action plans) to enable priorities to be set.
3. Strategic targeting and priorities often have to be set without complete information, but all agreed that the following were most useful criteria in targeting resources and setting priorities.

- Very bad environmental (and health) problems.
- Urgency of the problems which could be at a geographic, industry or facility level.
- Practicality of taking compliance and enforcement activity.
- Visibility of activity to encourage further compliance and get social acceptability.
- Public and political priorities.

In addition, the following information is important to have:

- Compliance history of the industry or facility.
  - Quantities of pollutants.
  - Geography.
  - Topography.
  - Specific pollutants.
4. Strategic targeting offers several benefits including: stretching limited sources to ensure most efficient and effective use of funds, resources and labor; helps to establish credibility, enhances ability to secure funding; provides sense of accomplishment, compliance and environmental results for sustainable development.



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## STRATEGIC TARGETING FOR COMPLIANCE AND ENFORCEMENT

DUFFY, RICHARD F.

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### SUMMARY

This paper reviews some of the history of the United States Environmental Protection Agency's (EPA) efforts to target its resources at sources of environmental pollution. The paper tracks the evolution of targeting efforts from the late 1970s to the present. Early targeting efforts were based almost exclusively on independent single-media approaches i.e., the clean air program and clean water program worked independently of each other, even if both programs were working with the same major industry groups or, in a few instances, the same facility or company. In the early 1990's, in recognition of the realities of one of the most basic physical principles, that of mass balance (where mass is neither created or destroyed, only its form changes), the Agency began working to implement more holistic multi-media approaches to environmental enforcement. Among recent efforts to implement holistic approaches are targeting compliance and enforcement efforts at individual industrial sectors based on their multi-media compliance histories and their overall reported releases of toxic chemicals. Holistic multi-media approaches are also being pursued for particular geographic areas and ecosystems, pollutants of concern, and corporations. Each of these major areas of activity are discussed in detail.

### 1 INTRODUCTION

Targeting of resources is a fundamental activity for any organization regardless of its size, nature of its work, or whether it is a public agency or private enterprise. It can be used by senior managers to inform and direct long-term macro-level strategic decisions looking one or several years into the future, and it can be used to guide short-term field-level decisions (i.e., the next few weeks or months) on how best to allocate resources to meet overall organization-wide goals. Targeting is becoming increasingly critical to the compliance and enforcement programs of EPA and the states as their regulatory programs have grown in scope and complexity at a time when budget constraints on federal and state governments are resulting in stagnant or declining resources levels. Efficient use of scarce field resources is essential if EPA and its state partners are to fulfill their many regulatory mandates. Strategic targeting based on sound analysis of information about the state of the environment and of compliance by regulated entities is essential to achieving efficiency.

Targeting plays an important role at several stages of the organizational planning process. It is essential to informing the early stages of the long-term planning process where senior managers consider ideas and concepts for organizational priorities and new areas of emphasis. Once macro-level decisions have been made, targeting analysis is critical for translating the macro-level directions into operational plans and commitments at the field office level. In many ways, the stages of the

targeting process are akin to peeling an onion - one layer leads to another until you get to the core. Targeting is an ongoing cyclic process, however, with measurement and analysis of the results of prior targeting efforts providing feedback to the organization for future planning.

## 2 BACKGROUND

For much of its existence, EPA has carried out its planning and targeting functions on a media-specific basis, e.g., the Clean Air program planned and targeted its program without interaction with the Clean Water program or the hazardous waste program. This approach was logical since the Agency has been organized by statutes which focus on particular environmental media, i.e., separate statutes and offices for air, water, hazardous and solid waste, and pesticides and toxic substances. Within each of these major organizational subcomponents, the planning and targeting process have started with identification of broad areas of priority, with iterative refinement of those priorities until they evolve into facility-specific action plans for field level operations in EPA or State agencies.

### 2.1 Early targeting of major sources of air and water pollution

Media-specific targeting has frequently been guided by deadlines or specific requirements contained in the individual statutes. In the late 1970's and early 1980's, the Clean Air and Clean Water programs targeted their efforts on specific lists of facilities and industries which had never achieved initial compliance with regulations promulgated under those statutes. Known as the Major Source Enforcement Effort (MSEE), "major" facilities were targeted by either EPA or state agencies. ("Major facility" is defined by the air program as a source with a potential to emit greater than 100 U.S. tons per year, and a "major facility" is defined by the water program as a source with discharges to navigable waters of greater than 1 million U.S. gallons per day). Facilities targeted were primarily power plants, publicly owned treatment works, petroleum refineries, steel mills, and chemical manufacturers. Collectively, EPA and the states took over 600 enforcement actions for water-related violations and over 400 actions for air-related violations. At the conclusion of the Major Source Enforcement Effort, initial compliance with the air and water statutes for many industries had been achieved, or enforceable schedules to achieve them had been established, and focus in these programs began to shift toward maintaining continuous compliance.

### 2.2 Significant noncompliance as a targeting mechanism

In the mid-1980's, the Agency began implementing the concept of "significant noncompliance" (SNC) into its management processes for use in long-term goal setting, annual planning, and measuring success. Each of the major regulatory enforcement programs established national criteria and definitions for high priority violations that constitute significant noncompliance. Significant noncomplier lists are not industry-specific nor geographically oriented, rather, the lists are generated by applying the media-specific criteria to the full universe of facilities regulated under each statute. If the facility meets the violation criteria, it is placed on the significant noncomplier list. Optimal timeframes for responding to facilities on the significant noncomplier list are established, with initial response to occur within at least 150 - 180 days after the violation is detected. Progress in responding to violations is closely monitored by each program, and the success of both EPA regional programs and state programs are judged, in part, based on performance vis-à-vis significant noncompliers. Significant noncompliance is a dynamic process which is well suited to the realities of pollution control where regulated entities can come in and out of compliance due to equipment

failures, poor operations and maintenance practices, or new regulatory requirements. The significant noncomplier concept continues to be a key management tool for identifying and addressing violators, and the definitions of significant noncompliance continue to be set on a media-specific basis.

### 2.3 Multi-media targeting

In the early 1990's, policymakers at EPA saw that many environmental issues transcend the boundaries of the media-specific programs, and work began on bringing a more holistic, multi-media perspective to compliance and enforcement goal setting, planning, and program implementation. The agency instituted both single- and multi-media inspection targeting and case screening to identify violations which involve significant health and environmental risks. The agency also formulated multi-media initiatives directed at specific industries. Initially, these changes met significant organizational inertia, and both the Administrator and Deputy Administrator, the top two ranking officials at EPA, put a significant amount of personal energy into making sure that the organizational culture at EPA began to take a broader view of the world. These first efforts to implement a holistic, multi-media perspective were generally successful, however, many managers in the media-specific programs were concerned about the high transaction costs associated with coordination among the programs, and about detracting from their basic responsibilities under each statute. Implementation of multi-media approaches continued to require significant commitment from the Agency's most senior officials.

Beginning in 1994, EPA undertook a major reorganization at its headquarters office intended in large part to institutionalize holistic, multi-media approaches to environmental protection. The reorganization consolidated five major media-specific headquarters offices into a single organizational entity with the responsibility for the compliance and enforcement requirements for all the environmental statutes. Similar, but not necessarily identical, consolidations have been implemented in EPA's ten regional offices. Key components of the new headquarters organization include an office dedicated to developing multi-media enforcement cases, offices with expertise in all matters pertaining to specific industries or sectors, and offices that consolidate information management, program planning, and targeting from all of the programs that conveyed to the new organization. This latter office is charged with integrating the media-specific facility data from each of the major computer data systems and conducting broad scale analysis of compliance trends and potential impacts on human health and ecosystems.

## 3 TARGETING FOR RESULTS

### 3.1 Early multi-media enforcement initiatives

The multi-media compliance and enforcement targeting efforts that took place in the early 1990's prior to the reorganization were focused on industries such as the pulp and paper and iron and steel industries. These efforts were coordinated by a senior level agency-wide enforcement steering committee which was known as the Enforcement Management Council (EMC). It consisted of representatives from each media office and from all ten regional offices. It served as a "board of directors for enforcement," and it oversaw and sanctioned the development of the enforcement initiatives targeted at major industry groups. It also sanctioned the analytical framework that was used for selecting these industries which consisted largely of an analysis of industry-wide multi-

media noncompliance rates, analysis of data reported by facilities to the Agency's Toxic Release Inventory (TRI) (it contains data self-reported by facilities on releases and transfers of over 300 toxic chemicals), and perceived opportunity.

These early initiatives were intended to test new ways of better focusing the attention of the enforcement program at problems that significantly impact human health and the environment, and make better use of scarce Federal and state enforcement resources. To the maximum extent practicable, environmental problems were to be addressed in a holistic, multi-media fashion. Resource efficiencies were expected through focusing inspections, enforcement actions, and settlements on industrial sectors of concern, pollutants of concern, and geographic areas where populations and/or ecosystems are at risk.

The bureaucratic obstacles to implementing these new approaches were significant. Managers and staff at all levels of EPA's enforcement programs were initially resistant to the notion of multi-media enforcement because of the additional new workload associated with establishing and maintaining a multitude of new channels of communication and coordination among the media offices. Many were also concerned that the resource and timing issues associated with developing and initiating multi-media actions would cause programs to fail to meet their media-specific commitments for conducting inspections and taking enforcement action within established guidelines for timely and appropriate response.

The EMC initially set as an operating assumption that the multi-media enforcement initiatives would be conducted from inspection to developing enforcement actions within a single year. With experience, it became clear that one year was simply not enough time to conduct an effective initiative if a significant number of new inspections are to be targeted, as opposed to relying primarily on "opportunistic" cases. At least one year is needed to simply plan and conduct inspections; there should be at least one more year for case development. Most initiatives are better implemented through a multi-year strategy which allows affected offices the lead time to strategically allocate inspection resources to the targeted areas. This is particularly true if the goals of an initiative are very complex or ambitious. A short time horizon also creates tension between regional and state program goals, particularly with respect to implementing the base program.

### 3.2 Targeting in the new compliance and enforcement organization

As mentioned above, the reorganization of headquarters compliance and enforcement functions consolidated many compliance and enforcement functions which for the prior ten years had been scattered throughout five major offices in headquarters. The reorganization emphasized five key objectives: (1) maintain an imposing enforcement presence to deter noncompliance; (2) use compliance assistance and other innovative tools in addition to formal enforcement actions to bring about compliance; (3) organize compliance strategies, and often formal enforcement activities, around sectors of the economy and ecosystems; (4) utilize multi-media, whole facility approaches to reach comprehensive solutions that fix problems and do not simply move a problem from one medium to another; and (5) measure success by improvements in compliance rates and environmental quality, not just by the number of cases brought or the amount of penalties collected.

Strategic targeting plays a central role in achieving all of these objectives. Targeting analysis plays a role from the very earliest stages of the program planning process where ideas and concepts for future organizational priorities are considered. The analytical process follows through the process of measuring the success of the program, where the targeting data serves as the baseline set of conditions against which results are being measured. Analysis of data may suggest or indicate trends within the regulated community that cause concern about the state of compliance, or it may suggest potential opportunities for achieving greater public health and environmental protection through use of innovative settlements or pollution prevention.

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It is very important that the analysis be based on sound and objective analytical techniques and methodologies that can withstand challenges by those facilities or areas that have been targeted. And while it is also important that there be consistency in analytical approaches, especially if targeting work is being conducted by different groups in the agency (e.g., conducted both at headquarters and in the regional offices), a balance needs to be struck in this area because strict adherence to uniform ways of doing analysis will also stifle creativity. It is also useful to expect that the analytical process will be iterative, with refinements either narrowing or broadening the scope of work. Useful byproducts of the iterative process include refinements which strengthen the overall analytical process and an increased understanding by senior managers and staff alike of the meaning and limitations of the data and the analysis.

3.3 Targeting analyses in EPA are generally focused on the following areas: industrial sectors, geographic areas/demographic analysis, corporate analysis, and risk-based analysis

#### 3.3.1 Industrial sectors

Analysis of industrial sectors is conducted using the United States' Standard Industrial Classification (SIC) codes. These codes are 4 digit numbers used to categorize industrial and commercial processes. The first two digits place the facility in a macro-level category (e.g., Category 28 includes Chemicals and Allied Products), and the following two digits provide greater definition and precision (e.g., Category 281 is the subcategory for Industrial Inorganic Chemicals, which is further subcategorized to 2812 for Alkalies and Chlorine, 2813 for Industrial Gases, etc.).

Objective rankings of industrial sectors are used for priority setting among many sectors. The ranking analysis typically includes the historical multi-media noncompliance patterns for all the facilities within the individual industrial groups (EPA's mainframe computer databases allow for analysis of trends over a two-year timeframe), historical information on enforcement actions taken against facilities within the sector, reported releases of toxic chemicals (both the amount of total releases and releases of known or suspected carcinogens), and the frequency of inspections. Relative rankings among the sectors are organized using the noncompliance rate as the primary ranking factor; the secondary ranking factors are total reported releases of toxic chemicals and total reported releases of known or suspected carcinogens. Rankings are developed at the national level to assist in selection of national priorities. Similar rankings are developed for each of EPA's ten regions to reflect the unique mix of industries that exist within each region. The national rankings and the region-specific rankings are then used during the annual planning process to inform discussions between headquarters and regional managers about region-specific priorities and how they relate to, or deviate from, the national priority industrial sectors. These data also form the baseline against which success is measured over time.

For FY 1996, the process described above was used to inform the selection of both national and region-specific priorities. At the national level, this process identified the following major industrial groups as priorities: petroleum refining, primary non-ferrous metals, industrial organic chemicals, plastic materials and synthetics, iron and basic steel products, and pulp mills. On a region-specific basis, some regions have many facilities within these industries and others may have none. Some industries with relatively high noncompliance rates and large releases of toxics may be located mostly in one region. By analyzing the data at both the national and regional levels, it is possible to inform the selection of macro-level national priorities while at the same time informing region-specific decisions about priorities.

### 3.3.2 Geographic areas/demographic analysis

Geographic analysis can be conducted using one of two starting points. The first starts with an objective set of criteria or characteristics and then attempts to find areas that match those criteria. A second starting point is with a geographic area that is selected based on general knowledge or information from within the agency or the community which indicates that environmental and/or compliance problems may exist. With a known area, the analysis focuses on gathering and sorting through all of the available information for the area for facilities, ecosystems, and populations.

In designing geographic analysis it is important to plan up front for how the data will be displayed. It is usually best to display the objective data in the form of maps created using Geographical Information System (GIS) or other types of graphical depictions (proving the old adage that "a picture is worth a thousand words"). In the Geographical Information System format, "layers" of information can be placed on the map to depict sources, their compliance status (either the rate over time or the current status), the relative volume and nature of their reported releases, important ecological characteristics such as receiving water bodies, critical habitats such as wetlands, watersheds, and recreational areas, and the density and demographics of surrounding populations (e.g., U.S. Census data on minority populations, income level, relative proportion of children and elderly, etc.). Tables containing the underlying data can also be presented, but the most effective way to convey such large volumes of information is proving to be through use of GIS maps.

### 3.3.3 Corporate analysis

Several models for objectively evaluating corporate compliance patterns have been considered by EPA. Starting points for analysis can be corporation size, number of facilities reported as being in significant noncompliance, corporation-wide noncompliance rate over time, and the total amount of reported releases of toxic chemicals by facilities owned by the corporation.

In corporate targeting analysis, patterns may emerge where corporations and their subsidiaries may be operating facilities improperly in many locations across the country. Corporations and their subsidiaries may operate under many different names, and it may initially be difficult to determine ownership. EPA has found, however, that this complex analysis can uncover persistent patterns of noncompliance across a corporation. In the absence of a unified enforcement response, the corporation may be able to greatly minimize its pollution control expenses. If a pattern can be identified, and a corporate-wide enforcement response developed, the impact on the corporation and its practices, and the resulting benefits to the environment, can be many times greater.

Corporate approaches can be resource intensive due to cross-program coordination and coordination among many or all headquarters and regional offices. Coordination becomes even more complex if EPA's state partners choose to participate in the action. A notable example of the benefits of the corporate approach was an action taken against Louisiana Pacific Corporation where a pattern of widespread noncompliance was uncovered. The government uncovered evidence through its databases and other sources of information that Louisiana Pacific had failed to apply for required Clean Air Act permits and provided incomplete or low estimates on air emissions at 11 of its oriented strand board and medium density fiberboard facilities located in nine states. As a result of the company's failure to report all its air emissions of volatile organic compounds, particulate matter, or carbon monoxide comprehensively, neither the federal nor state governments would or could accurately know the level of air quality deterioration in the vicinity of the plants. In addition, the company avoided installing pollution control equipment that would have been required to prevent the significant deterioration of air quality in areas which were attaining ambient air quality standards. In settling the case, the company paid an \$11 million penalty, the largest Clean Air Act penalty in

EPA's history, and the company is implementing an extensive Clean Air Act compliance program including obtaining all necessary air permits and complying with all necessary requirements and regulations.

#### 3.3.4 Risk-based analysis

Developing risk-based targeting techniques has tested the limits of the data that EPA collects on regulated facilities and ambient environmental conditions. It has also brought into play evolving sciences related to the toxicity and fate of chemicals, pollution pathways, the synergistic effects of chemicals, etc. As EPA has worked to develop a risk-based targeting capability, it has struggled to reconcile conflicting approaches coming out of the scientific community. EPA has convened a workgroup to consider how risk assessment models might be used effectively and confidently and incorporated into the operating strategy of EPA's enforcement and compliance assurance program. The workgroup assembled a compendium of over 160 models, and through repeated applications of ranking and screening criteria arrived at a set of 6 models that are being subjected to more thorough and detailed investigations. The evaluation criteria included amount and type of required data and whether the model provides consideration of multi-media risk and human exposure. For the models which pass the continued evaluation, both independent (of EPA) peer review and the production of guidance to prospective model users will be undertaken. If no models pass these tests, consideration will be given to developing a new model designed specifically for the compliance and enforcement program.

Risk-based approaches are expected to have applications in the conduct of industrial sector analyses, pollutant-specific targeting analyses, corporate analyses, and geographic/demographic and ecosystem analyses. One approach that will be explored will be the development of relative risk rankings of facilities where the amounts of reported releases for individual toxic chemicals are weighted by the toxicity factors for each chemical. An analysis that uses only the total number of pounds released may overstate, in a relative sense, the potential impact of one facility over another. For example, in industrial sector or geographic/demographic targeting, weighting releases by the respective toxicity factors of the individual chemicals may reorder the list of facilities within the sector or area from rankings based on the total amount of all chemicals released. From a program planning perspective, all facilities may still receive an inspection and/or enforcement action, but the order in which the inspections or actions are scheduled may be adjusted to first get to the facilities of greater concern or potential impact to surrounding populations.

Risk-based targeting analysis can be conducted where identified environmental conditions exist (e.g., aquatic systems with known contaminated sediments, river segments where fishing is forbidden, contaminated fish tissue), and then the agency can identify through its data facilities which may be contributing the contaminants of concern. The analysis can assist in developing and implementing strategies (either enforcement or facility permit improvement strategies) for reducing loadings of problem contaminants, directly reducing known risks to human health and aquatic systems.

## 4 CONCLUSIONS

In conclusion, the following thoughts may be useful in guiding and implementing strategic targeting approaches:

1. Define objective and defensible analytical criteria to ensure that the agency is on solid footing in the selection of enforcement priorities and targets; industries and facilities may take exception to having been targeted as a noncomplier or a potential health risk.

2. Synchronize the analytical process with the agency's annual planning processes to maximize results and to better inform the identification and selection of priorities. Establish baseline compliance and enforcement trend data and use this data to monitor and measure success, results and effectiveness.
3. Make the targeting process inclusive (there isn't a monopoly on good ideas), iterative (macro-level for budget and national guidance, region-specific for local priorities and specific inspection plans), and supple to accommodate emerging priorities, new ideas, or unexpected occurrences (e.g., newly-identified health threats, accidents, spills).
4. Take maximum advantage of the investment that the government has made in the collection (and automation) of compliance and enforcement data. If the agency is not going to use data, perhaps it should not spend resources to collect it.

### REFERENCES

1. Memorandum from Elaine G. Stanley entitled "Final Report of the Workgroup on Measures of Success for the Office of Enforcement and Compliance Assurance." January 24, 1995.
2. Memorandum from Steven A. Herman entitled "Case Conclusion Data Sheet - Pilot Reporting for FY 1995." March 22, 1995.
3. Memorandum from Steven A. Herman entitled "Final FY1996/FY1997 Office of Enforcement and Compliance Assurance Memorandum of Agreement Guidance." June 22, 1995.

## SPECIAL TOPIC WORKSHOP C

### Integrated Permitting and Inspection

Many nations are moving toward integrated permitting and inspection, and others are considering this approach. Workshop C discussions built on the UNEP training manual and a new capacity-building technical support document prepared for the Fourth International Conference on Multi-media Inspection Protocols. Papers and Workshop C discussion topics address the following issues:

- The extent of country experiences with integrated permitting and/or integrated multi-media) inspections.
- How an integrated permit is defined, specifically whether it covers procedural integration, administrative integration, substantive integration, or all three. What is different about integrated versus single-media or program permits.
- Advantages and disadvantages of integrated permits and whether they are more or less efficient and effective, why, and in what circumstances.
- Potential and actual compliance and environmental results from integrated permits that would not have resulted from single-media permits.
- Level of difficulty in issuing and monitoring compliance with integrated permits: is it more or less difficult to achieve compliance in the regulated community.
- Special expertise needed to implement integrated inspection programs.
- How an integrated multi-media inspection is defined, specifically whether it is a team of inspectors with single program expertise, a single inspector trained to inspect for compliance with multiple programs, a review of overall processes and environmental performance, and/or a broad screen for potential problems.
- Implications of pollution prevention concerns on integration of compliance approaches.

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1. Summary of Integrated Permitting and Inspection Workshop <i>Facilitators</i> : <i>J. Skinner and C. Wasserman, Rapporteur, J. Mozingo</i> .....	335
2. Innovative Multi-media Compliance, Enforcement, and Pollution Prevention Approaches to Environmental Compliance at Federal Facilities in the United States of America, <i>R.B. Cheatham, J.R. Edward, W.H. Frank, R.J. Satterfield</i> .....	341
3. See also Synopsis of International Comparison of Source Self-Monitoring, Reporting, and Recordkeeping Requirements, Workshop D.....	393
4. See also Synopsis Multi-media Inspection Protocols: International Examples, Workshop D.....	394

5. See also Synopsis of Course: Conducting Multi-media Inspections, Workshop D..... 395
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See related papers from other International Workshop and Conference Proceedings:

1. Integrated Pollution Control in England and Wales, *D. Bryce*, Volume I, Oaxaca, México
2. Swedish System of Intergrated Permitting — Whether It Enhances Compliance and Enforceability, *L. Svermdal*, Volume I, Budapest, Hungary
3. The U.S. Environmental Protection Agency's Integrated Compliance by the Federal Government, *T. McCall*, Volume I, Budapest, Hungary

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## INTEGRATED PERMITTING AND INSPECTION

Facilitators: John Skinner, Cheryl Wasserman  
Rapporteur: Jack Mozingo

### GOALS

Discussions were designed to address the following issues:

- The extent of country experiences with integrated permitting and/or integrated (multi-media) inspections.
- How an integrated permit is defined, specifically whether it covers procedural integration, administrative integration, substantive integration or all three. What is different about integrated versus single media or program permits.
- Advantages and disadvantages of integrated permits and whether they are more or less efficient and effective and why, in what circumstances.
- Potential and actual results from integrated permits that would not have resulted from single-media permits.
- Level of difficulty in issuing and monitoring compliance with integrated permits: more or less difficult to achieve compliance by the regulated community.
- Special expertise needed to implement integrated inspection programs.
- Impact on integration of compliance and pollution prevention concerns and approaches

## 1 INTRODUCTION

Many nations are moving toward integrated permitting and inspection, and others considering these approaches. This movement reflects several concerns, including: 1) recognition that the environment and impacts on the environment often is not neatly compartmentalized into single media such as air, water and land, but is an integrated system requiring integrated considerations on the best approaches to control pollution and its impacts; 2) increased emphasis on prevention of pollution which often requires an integrated look at new processes and technologies rather than end-of-pipe treatment for a single environmental medium; 3) a desire to achieve greater efficiency in permitting and inspection activity; 4) a desire to avoid transfers of pollution from one medium to another. Despite the desire to achieve more integrated environmental management through integrated permitting and inspection, experience has been limited. Attempts to integrate have raised management and decision-making concerns about complexity of decision-making and implementation; whether it really is more efficient and how it can be implemented efficiently, and whether these approaches really result in integrated control and prevention approaches.

## 2 PAPERS

A Capacity Building Support Document was prepared by the Conference sponsors on Multi-media Inspection Protocols with international examples. The document includes discussions on and examples of a range of approaches and definitions, along with the potential advantages and disadvantages of each approach.

In addition, a paper prepared by Reginald Cheatham, et al. describes a multi-media strategy for strategic targeting, compliance promotion and outreach, inspection and enforcement response for the federal facilities sector within the United States. Data is presented on the success of the strategy first described in the Proceedings of the second International Conference in Budapest, Hungary.

## 3 DISCUSSION SUMMARY

### 3.1 Defining "integrated permits and integrated permitting"

Integrated permits were defined by the participants as: *one permit related to one facility covering all elements of the environment*. The group realized that there were different approaches and goals for integrated permitting systems and integrated permits that existed around the globe, ranging from integration of permitting processes to integration of the substantive requirements in a permit. Three categories of approaches were identified with three types within one of the categories yielding a total of five different approaches:

- 1) An additive approach (or "the big staple") which added together the results of what were essentially separate permitting processes to deliver a single permit.
- 2) A coordinated approach in which separate permitting processes are coordinated to ensure that cross-media and cross-program transfers of pollution do not occur and that information about the facility is shared for purposes of decision-making on a media-by-media and program-by-program basis.
- 3) Holistic approaches which create new substantive requirements as a result of permit integration at three possible levels:
  - a) best available technology from a multi-media standpoint is applied;
  - b) pollution prevention and cleaner technology is emphasized in addition to a base-line of compliance including resource; and/or
  - c) the integrated permit takes into account overall environmental impacts.

### 3.2 Country experiences with integrated permitting

Many countries throughout the globe are interested in pursuing integrated approaches to environmental management for permitting and inspection activities. For example in Europe, the Integrated Pollution Permitting and Control (IPPC) Directive from the European Union provides new impetus for an integrated approach in both Western Europe and Central and Eastern Europe, participants from both Italy and Poland described current efforts to address this challenge through new legislation and review of ongoing programs. In the United States, a recent reorganization is enhancing the ability of the program to adopt more sector and geographic based approaches to

inspection and enforcement activity. In Estonia it is a "dream", Bhutan is in its early stages of program development with an Environmental Commission and Environmental Impact Assessment (EIA) mandate but little else is in place as yet.

In reviewing country experiences, it was clear that few countries have had actual experience with integrated permitting that is holistic, and that experiences reflected the range of approaches identified above. Most countries are attempting to coordinate permitting processes, while still issuing separate permits. Among the countries participating in the workshop, only New Zealand had experience with holistic approaches at the 3c level, taking into account overall environmental impacts by using Environmental Impact Assessment as an application and including ecological conditions in a single environmental permit. They have only issued 3 to 4 such permits since their laws were changed in 1991. While EIA's are required in many countries for permitting, they are usually not associated with issuance of a single comprehensive permit which reflects the full range of impacts from pollution loadings to ecological implications. Some U.S. States are experimenting with level 3b integrated permitting but have not yet issued such permits. The U.S. EPA has gone so far as to develop sector-based standard-setting for performance requirements in permits which emphasize considerations of 3a (BACT from a multi-media standpoint), and 3b (pollution prevention and cleaner technology from a multi-media standpoint), that would then be the basis for single media permitting; and has provided opportunities for additive and coordinated permitting. Many countries in Western, Central and Eastern Europe are preparing to comply with European Unions' IPPC requirement for integrated permitting and are facing some very real implementation issues.

Italy issues permits based upon BACT determinations which are holistic, and relies upon a separate EIA process to ensure broader environmental impacts are addressed. Poland is currently pursuing coordinated permitting approaches to prevent unwanted transfers of pollution from medium to medium.

### 3.3 Implementation issues for integrated permitting

#### 3.3.1 Relationship between Environmental Impact Assessment (EIA) processes and integrated permitting

In many countries around the world, environmental impact assessment precedes permitting and has the potential to serve as a basis for an integrated permit application. The EIA typically involves an holistic assessment of releases, risks, ecological impacts, resource usage, and all other environmental implications. EIA, if followed up with enforceable operational and/or siting conditions, brings many of the advantages of integrated permitting even where such permitting is not practiced.

If an integrated permit is intended to identify, measure, weigh, and resolve tradeoffs among media, risks, and impacts, difficulties remain as to how this can be accomplished, particularly given the absence of methods, technical skills and discretion not easily exercised by the typical permit writer. One very important observation was that it is not possible to assign common values to different types of impacts, whether during the EIA process or during permitting. Possible solutions involve: 1) more guidance, 2) including such judgments in standards for these types of permits in advance, and 3) getting discussions among teams of experts who can help to address such issues in the permitting process itself.

Additional concerns are the pressures to permit new construction and the potential for delay to address ecological issues related to flora and fauna. For fully integrated permitting the time involved in collecting and analyzing information could be substantial. As with EIA, assessment

of ecological impacts often takes at least one growing season. There was some discussion of whether permitting could proceed when less time was available, with additional data collection and analysis requirements incorporated into the permits.

The advisability of this approach really depended upon the types of impacts of concern since moving ahead with permitting could reduce options to mitigate or avoid important environmental impacts.

### 3.3.2 Organizational issues

Single medium permitting and inspection is the norm in many countries so organizational lines are drawn by medium. A move to integrated permitting or inspections raises organizational issues created by both organizational autonomy and the need to cut across organizational lines of authority. A move to integrated permitting or enforcement compels at least an examination of organizational relationships. In some countries, a designated "lead" agency or organization can overcome some of the problems posed by institutional barriers. Solutions discussed among participants included New Zealand's approach of making one person responsible both for a site and a sector to ensure consistency. Related approaches include assigning lead responsibility to one organization to coordinate and integrate permits as is done in Romania, and South Africa's proposed tiered model in which local inspectors serve largely to screen for compliance problems and regional experts, who have sector specific expertise, are brought in less frequently or when necessary, ensuring familiarity with local conditions while maintaining expertise. Romania used audits of permit writers and inspectors to provide integration and ensure consistency.

### 3.4 Multi-media inspections

Workshop participants reviewed the new capacity building support document on Integrated Multi-media Inspection approaches and discussed the distinctions that are similar to those in integrated permitting between different approaches. The different approaches included:

- 1) Multi-media screening which may accompany a single media inspection
- 2) Consolidated (one or two multi-media trained inspectors for that sector or industry)
- 3) Multi-media Team Inspections (single media inspectors inspect at one time)
- 4) Process-based inspection

along with different substantive purposes and scope for these inspections, which might include:

- a) Compliance only;
- b) screening of environmental impacts; and
- c) technical assistance for prevention and compliance.

#### 3.4.1 Separate or integrated inspection and permitting staffs

The group discussed whether the same individuals should write permits and perform inspections.

While Austria and South Africa have combined these roles, and New Zealand's site coordinator coordinates both for a site, there was general agreement with Italy's experience that it works better to separate responsibility for inspection and permitting. This preference for separation of these functions reflects the experience of Norway (see published paper by Gro Rodland in proceedings), and the advisory group experience in the United Nations Environmental Program's

Manual on Institution Building for Industrial Compliance. It may encourage too close a relationship between facility and inspector or inability to approach permit requirements objectively for independent evaluation of compliance and enforcement.

#### 3.4.2 Integrated inspection without integrated permits

Programs can have integrated permitting not accompanied by integrated inspections and integrated inspection but not integrated permits. There is insufficient experience to assess whether an integrated permit would assist multi-media inspection. The U.S. EPA has developed and requires use of a multi-media screening approach to be used for all inspections, regardless of whether they are single or multi-media and has introduced greater use of both coordinated and team inspections for specific types of situations. EPA and its state counterparts are experimenting with new roles for inspectors in performing process-based inspections which are more capable of identifying cross-media transfer problems and pollution prevention opportunities.

## 4 CONCLUSION

Many countries are adopting and experimenting with integrated approaches to permitting and inspection. There is no single approach, but a variety approaches from separate permits or inspections which are simultaneous, to coordinated permitting and/or inspection to holistic approaches which are multi-media, process-based or integrate broad environmental concerns. Countries may have integrated inspection without integrated permits, and integrated permits without integrated inspection. There is still limited experience with organizing and implementing fully integrated single permit and single inspection schemes for all media and programs which adopt holistic and process-based approaches to environmental protection. Questions still exist as to the best means of organizing and implementing such programs, their efficiency and methods for making trade-offs among media where issues arise. Much can be gained by further sharing of experiences and clarifying what is meant by these terms when addressing them. The workshop participants developed useful definitions for the range of approaches which should help in this process of exchange and learning from each other's experiences.



## **INNOVATIVE MULTI-MEDIA COMPLIANCE, ENFORCEMENT AND POLLUTION PREVENTION APPROACHES TO ENVIRONMENTAL COMPLIANCE AT FEDERAL FACILITIES IN THE UNITED STATES OF AMERICA**

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### **SUMMARY**

The United States Environmental Protection Agency (EPA) oversees the Federal government's efforts to manage and clean up safely the radioactive, hazardous, and mixed wastes generated from its weapons research and production activities, operation of its military bases, and a myriad of activities in non-defense areas. To accomplish its mission, EPA is implementing an integrated management strategy for environmental performance by the federal government. The immediate goal of the strategy is to assure that the federal government meets or exceeds compliance with all applicable environmental laws and regulations. The ultimate objective of the strategy is for the federal government to lead the way by setting an example for the entire nation in environmental performance.<sup>1</sup>

The five components of the integrated management strategy are:

- Legal and Regulatory Authority.
- Regulatory Agency Responsibilities and Organization.
- Training and Technical Assistance.
- Compliance Monitoring.
- Enforcement Options.

This paper will focus on the implementation of programs and initiatives that directly and indirectly influence the execution of these five components of the integrated management strategy. The first subject for discussion will be the Federal Facility Compliance Act and how this legal authority has enabled EPA to implement U.S. hazardous waste law with respect to Federal facilities in the same manner as private facilities. Second, a discussion of EPA's Federal Facility Multi-media Enforcement/Compliance Initiative (FMCEI) will show legal authorities applied within a policy framework that seeks efficiencies of scale by going beyond the single-media approach of the past. The third section of the paper addresses one of the best overall examples of the direction EPA is going in trying to improve environmental management systems in the Federal sector, which is the ongoing effort to address the environmental performance and concerns of Civilian Federal Agencies. The fourth section of the paper addresses one of the most innovative approaches to improved environmental management in the Federal sector, the implementation of Executive Order 12856, entitled "Federal Compliance with Right-To-Know Laws and Pollution Prevention Requirements," which requires that federal agencies comply with the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and Pollution Prevention Act of 1990. Section five of the paper discusses the future directions of EPA's federal facility enforcement program and offers some conclusions from the antecedent discussions. There are two attachments: a guidance (Attachment A) on assisting enforcement personnel in identifying and documenting pollution prevention

opportunities that can be incorporated into enforcement settlement agreements with particular Federal facilities and a generic Federal Facility Pollution Prevention Field Reporting Form (Attachment B).

The responsibility for implementing the integrated management strategy within EPA lies with the Office of Enforcement and Compliance Assurance (OECA). Within this Office, the Federal Facilities Enforcement Office (FFEO), working with the EPA Regions, deals with multi-media compliance issues under all environmental statutes as well as cleanup and remediation under Superfund.

Compliance at Federal facilities is monitored by EPA through both facility inspections and the analysis of self-monitoring reports which are often required by statute or regulation and submitted by Federal agencies. Upon the discovery of a statutory or permit violation at a Federal facility, the appropriate EPA Region initiates an enforcement action pursuant to the enforcement authorities granted to the Agency in the environmental law which has been violated. The procedure for initiating these enforcement actions depends on the program under which the action is being taken.

Multi-media enforcement and compliance approaches, such as the Federal Facility Multi-media Enforcement/Compliance Initiative and the Civilian Federal Agencies Strategy, ensure that Federal facilities are evaluated for full compliance with environmental laws. Regulatory reform initiatives such as the Common Sense Initiative and Project XL will move environmental protection at Federal facilities into the next century, moving EPA successfully toward the goal of the integrated management strategy at Federal facilities.

Many Departments and Agencies currently use a multi-media approach in their environmental auditing activities. EPA is promoting and facilitating this type of compliance monitoring, which involves a more holistic view of compliance deficiencies and increased environmental awareness by Federal employees. By emphasizing the use of creative solutions to these deficiencies, such as pollution prevention, the Agency promotes both increased compliance and decreased cost.

## **1 LEGAL AND REGULATORY AUTHORITY**

The most significant recent indicators of the direction in which U.S. environmental law is moving with respect to Federal facilities are the passage of the Federal Facility Compliance Act and the issuance of Executive Order 12856 (See Sec. 4.0, below). These authorities enable EPA to implement hazardous waste and community right-to-know laws with respect to Federal facilities in the same manner as private facilities.

On October 6, 1992, the Federal Facility Compliance Act of 1992, Pub. Law No. 102-386 (the Act), became law.<sup>2</sup> This Act amends the waiver of sovereign immunity found in the Resource Conservation and Recovery Act (RCRA).<sup>3</sup> The Act's legislative history indicates that its primary purpose is to ensure that Federal facilities are treated the same as private parties with regard to compliance with the requirements of the earlier Act. For example, the Conference Report states "where EPA uses an administrative complaint pursuant to section 3008(a) to address particular types of violations detected at a private company or municipality the Administrator must use an administrative complaint to address the same types of violations at a federal facility".

Prior to the Act's passage, EPA took enforcement actions against Federal agencies differently than against private parties. This difference was tied to the language of section 6001 of, the hazardous waste law Resource Conservation and Recovery Act, 42 U.S.C. § 6961. According to the Department of Justice's 1987 testimony before the House Subcommittee on Oversight and

Investigations, Committee on Energy and Commerce, EPA lacked the statutory authority necessary to issue administrative compliance orders (pursuant to the Resource Conservation and Recovery Act section 3008(a)). EPA, thus negotiated Federal Facility Compliance Agreements with Federal facilities to bring them into compliance.

Through passage of the 1992 Act, Congress clarified that administrative order authority is available to the Administrator, and this authority has been given directly to the Administrator:

*"The Administrator shall initiate an administrative enforcement action against such a department ... in the same manner and under the same circumstances as an action would be initiated against any other person"*

In addition, under section 103 of the Act, Congress further clarified that federal agencies are persons for purposes of Resource Conservation and Recovery Act. EPA now has administrative compliance order authority against Federal facilities under the latter Act.

In the Federal Facility Compliance Act of 1992, Congress stated that "the Federal, State, interstate, and local substantive and procedural requirements referred to in this subsection include, but are not limited to, all administrative orders and all civil and administrative penalties and fines, regardless of whether such penalties or fines are punitive or coercive in nature or imposed for isolated, intermittent, or continuing violations:"

As a matter of policy, EPA will pursue penalties only from the effective date of the Act forward.<sup>7</sup> If violations occurred prior to the effective date and are ongoing, EPA could assess penalties for the violations from October 6, 1992 until correction of the violation.

In summary, the Federal government is liable for the Resource Conservation Recovery Act civil and administrative penalties just like any other person (with the exception of the effective date of the Act limitation). Since the law and the Congressional intent state that Federal agencies are liable for penalties, EPA will apply its current applicable penalty policy, presently the 1990 Civil Penalty Policy, against the Federal government for violations of the Act in the same manner and to the same extent as against any private party.<sup>8</sup> The February 12, 1991 "Policy on the Use of Supplemental Enforcement Projects" also applies in this context. Moreover, for settled cases that require compliance work, stipulated penalties should be included in the Consent Agreement and Consent Order.

EPA believes that the Federal Facility Compliance Act will enhance accountability of Federal facilities for environmental cleanup and compliance. At the same time, the legislation recognizes the unique situation of Federal facilities by ensuring that the authority to impose penalties on these Federal facilities is exercised within a fair, workable framework. In this regard, the legislation contains provisions which address mixed waste, munitions, public vessels, wastewater treatment works, payment of fees by Federal agencies and protection from personal liability for Federal employees.

Since the passage of Federal Facility Compliance Act, EPA and the states have compiled an impressive enforcement and compliance record. EPA and states have issued over 100 orders to federal facilities, seeking over \$12 million in penalties. Many of these actions have involved very significant violations, including open burning and open detonation of munitions, and storing hazardous wastes without permits. These violations not only threaten the health and welfare of neighboring communities, but those of our service men and women, and civilian workers as well.

For example, during a 1992 inspection, EPA found that a particular Federal facility had stored over 22,000 pounds of hazardous waste unprotected and outdoors in an area prohibited for such storage by the facility's Resource Conservation and Recovery Act hazardous waste permit. When EPA returned to the same facility a year later for another inspection, large quantities of waste

were being stored in the same location, still in violation of the permit, prompting a penalty action. Months after assessing over one million dollars in penalties, EPA conducted an inspection at the facility and no violations were detected in their day-to-day waste management activities.

In FY 94, EPA and the states issued 40 orders against Federal facilities seeking more than \$6.5 million in penalties. Many of these actions involved open burning and open detonation of munitions without permits and storing hazardous wastes without permits. These violations not only threaten the health and welfare of neighboring communities, but those of our service men and women and civilian workers as well.

During FY 1995, EPA and states achieved or made significant progress towards achieving a wide range of programmatic objectives. EPA continued to emphasize aggressive enforcement of environmental regulations at Federal facilities, particularly Resource Conservation and Recovery Act requirements under the Federal Facility Compliance Act. In FY 1995, EPA issued 12 Consent Agreements and Final Orders under Resource Conservation and Recovery Act §3008. The types of violations addressed under these actions ranged from illegal transport of hazardous waste and improper waste management to inadequate waste characterization and various procedural/administrative errors. Total penalties associated with these actions amounted to nearly \$360,000, with an additional \$1.5 million worth of supplemental environmental projects. During FY 1995, EPA also issued a total of six Resource Conservation and Recovery Act §3008 Complaints and Orders with opportunities for hearings. Total potential penalties associated with these actions exceeds \$1.1 million. During the year, EPA issued two Corrective Action Orders under Resource Conservation and Recovery Act 3008(h) against the Air Force. Federal facilities affected by Resource Conservation and Recovery Act Orders were located across seven EPA Regions and included Army, Navy, and Air Force installations, as well as facilities under the oversight of Civilian Federal Agencies (CFAs) such as the Coast Guard, U.S. Department of Agriculture, and Department of the Interior.

The Federal Facility Compliance Act demonstrates a commitment of leadership in government by providing an opportunity for a positive and constructive relationship with the States and ensuring that Federal facilities live up to the same environmental standards that apply to private facilities.

## **2 STRATEGIES FOR IMPROVING ENVIRONMENTAL MANAGEMENT AND COMPLIANCE AT CIVILIAN FEDERAL AGENCIES**

### **2.1 Background**

One of the best examples of the direction EPA is going in trying to improve environmental management systems in the Federal sector is the ongoing effort to address the environmental performance and concerns of Civilian Federal Agencies. Recent legislative and executive actions have placed additional legal requirements and reporting responsibilities on Federal agencies and have focused attention on their environmental performance. Despite efforts on the part of some agencies to redefine their missions to include environmental stewardship, most Civilian Federal Agencies are lagging considerably behind the environmental performance curve and may be responsible for significant cleanup and compliance problems that have not yet received adequate attention. As one example, EPA has determined that between 400 and 500 contaminated sites are owned or operated by 16 Civilian Federal Agencies. These sites vary from major research laboratories and illegal drug operations seized by the Drug Enforcement Agency to landfills and mines owned by the Departments of Interior and Agriculture.

Civilian Federal Agencies often lack the infrastructure, budget, and technical expertise to effectively manage environmental problems. Resource limitations may force many agencies into a reactive — rather than proactive — posture on environmental compliance. Nor are Civilian Federal Agencies closely monitored for compliance by EPA or the states. For example, although 56 percent of the Federal facilities that EPA tracks in its database are owned or operated by civilian agencies, in FY 1994, only one third of the total number of Federal facility inspections conducted by EPA and the states were performed at Civilian Federal Agencies facilities (380 out of 1,163). Meanwhile, the percentage of Civilian Federal Agencies facilities among all federal facilities with Class I Resource Conservation and Recovery Act violations increased from 13 to 24 percent between FY 1993 and FY 1994.

At the heart of the problem is the failure of many smaller Federal agencies to embody environmental compliance in systems that get their employees' attention, such as management commitment, reward systems, or personnel performance evaluation criteria. As a result, when hazardous waste contamination or violations of environmental statutes do occur, these agencies are more likely to produce an inappropriate response to the problem. This in turn compromises the personal liability of the agency's employees and the compliance status of the agency and its facilities, and increases the potential for third party impairment or loss and associated legal complaints.

## 2.2 Findings

A 1993 survey conducted by the Task Force received responses from 27 Civilian Federal Agencies, confirming these problems:

- Over 80% of the Civilian Federal Agencies reported that they have no formal compliance training program at either the regional or installation level for employees charged with ensuring agency compliance.
- Implementation of pollution prevention strategies as part of the agency's mission.
- Only 22% of the agencies reported having a formal award system that encourages environmental compliance among agency employees.
- Only 40% of the Civilian Federal Agencies have conducted a third-party assessment of the effectiveness of their agency's environmental management program in reducing violations and risks.
- 50% of respondents have not identified environmental liabilities from past operations or are only now in the process of developing a plan to do so.
- 50% of the agencies reported that they do not perform risk evaluations of environmental cleanup contractors prior to award, or that they did not know of such evaluations.
- Only one agency reported having an agency-wide system or database to ensure that proper records (e.g., waste manifests, biennial reports, permit status, etc.) are maintained and updated.

## 2.3 Goals

As part of the development of a strategy to improve Civilian Federal Agencies environmental performance, the Civilian Federal Agencies Task Force articulated the following overarching goals of this effort:

- Assist Civilian Federal Agencies environmental compliance and management programs in evolving to higher levels of performance by providing accelerated access to resources.
- Improve communications between EPA headquarters, EPA regions, federal agencies and facilities.
- Give federal agencies that have more experience and expertise (i.e., the Department of Defense and the Department of Energy) the opportunity to demonstrate leadership by sharing information and helping other agencies resolve environmental problems.
- Provide EPA with an opportunity to improve federal agency environmental management and compliance performance through technical assistance, compliance assistance, and outreach.

## 2.4 Needs and recommendations

The Civilian Federal Agencies Task Force identified the following six areas of highest need for improving Civilian Federal Agencies environmental program management:

### 2.4.1 Environmental management training

Inadequate training and a shortage of on-board expertise in environmental management are key impediments to compliance. What training programs do exist are not well publicized and are frequently inadequate or duplicative across federal agencies.

### 2.4.2 Information resources

Regulatory requirements are voluminous and subject to change. Many Civilian Federal Agencies have difficulty finding timely and reliable sources of information on new and proposed regulations and on innovative technologies and management strategies.

### 2.4.3 Compliance monitoring

Most Civilian Federal Agencies lack a centralized data management system that alerts agency headquarters personnel to changes in facility compliance status, regulatory violations, and pending enforcement actions.

### 2.4.4 EPA assistance on specific compliance issues

Smaller agencies would benefit from tapping EPA's environmental management expertise to develop internal compliance programs, pollution prevention strategies, environmental auditing, and other policies.

### 2.4.5 Sufficient staffing

Most smaller agencies have a limited number of experienced technical staff. Greater in-house expertise is needed in hazardous material/waste management, pollution prevention technology, and environmental engineering as well as actual experience in hazardous waste site remediation.

#### 2.4.6 Communications

Many Civilian Federal Agencies encounter a confusing lack of consistency on regulatory requirements between EPA headquarters and regional offices. A lack of understanding of each other's organizational structures, budgeting processes, and current priorities is a problem for both Civilian Federal Agencies and EPA.

#### 2.5 Conclusions and future directions

EPA will strive to develop a consensus with Task Force members on the most effective ways to implement these and other recommendations. EPA will offer continued technical assistance to foster improvement in Civilian Federal Agencies compliance programs, building on the success of recent initiatives to establish permanent networks and databases to promote compliance and environmental excellence at smaller federal agencies. More broadly, EPA recognizes the unique environmental management concerns faced by smaller-sized federal agencies and will seek to ensure that these concerns are reflected in the development of national strategies, enforcement policies, and outreach initiatives conducted by Federal Facilities Enforcement Office.

These efforts represent a first, albeit significant, step in forming lasting partnerships among federal agencies. Another important collaborative effort will be the development of the Federal Government Environmental Challenge Program mandated under Executive Order 12856. The Environmental Challenge Program will provide a vision to federal agencies to go beyond compliance with the law by developing state-of-the-art environmental management programs and implementing pollution prevention concepts into all aspects of their operations.

Both management and staff level employees at federal agencies are continually "on the line" making decisions that affect an agency's compliance status. An environmental management program that is purely reactive to regulations and environmental practices will be a serious handicap for a federal agency in the years ahead. Civilian federal agencies represent a tremendous potential for environmental excellence and a proactive approach to environmental management. With coordination and effective exchange of information, the resources and talents of federal agencies can be marshaled to provide a source of leadership in environmental management.

### **3 MULTI-MEDIA ENFORCEMENT AND COMPLIANCE AT FEDERAL FACILITIES**

EPA established the Federal Facility Multi-media Enforcement/Compliance Initiative (FMECI) as an Agency priority for FY 1993 and FY 1994 in recognition of the fact that Federal facilities are highly visible and have a mandate and commitment to address environmental problems in the Federal sector. Traditionally, however, Federal facilities have demonstrated lower rates of compliance with environmental laws than have private sector facilities.

#### 3.1 Background

The Federal Facility Multi Media Enforcement/Compliance Initiative was a national initiative designed to assess compliance of Federal facilities with environmental laws using multi-media inspections and enforcement to address areas of non-compliance. The initiative consisted of a series of coordinated multi-media team inspections conducted by all ten EPA Regional Offices, in concert with appropriate State officials, at highest risk Federal facilities throughout the nation. An Interim National Report on the results of the Federal Facility Multi Media Enforcement/Compliance Initiative, based on FY 1993 data, was published in November of 1994 (EPA 300-R-94-007).

### 3.2 Objectives

In the past few years, EPA and Federal facilities have stepped up efforts to ensure that environmental compliance is thorough, expedient, and just. Pursuant to those goals, and underscored by the Federal Facilities Compliance Act of 1992, the Federal Facility Multi Media Enforcement/Compliance Initiative seeks to:

- Foster improved Federal agency compliance with environmental laws and regulations.
- Help reduce environmental risks posed by Federal facilities by increasing the use of multi-media inspections.
- Achieve efficient use of enforcement authorities by consolidating efforts.
- Expand the application of pollution prevention measures so that facilities can exceed baseline compliance.

The next section explains EPA's approach to the design and implementation of the Federal Facility Multi Media Enforcement/Compliance Initiative.

### 3.3 Guidance/targeting criteria

EPA Regions performed their field activities in accordance with the FY 1993-1994 Federal Facility Multi Media Enforcement/Compliance Initiative Implementation Guidance Document prepared by the Federal Facilities Enforcement Office (FFEO) of the Office of Enforcement and Compliance Assurance (OECA). The guidance specified that each Region conduct at least two multi-media inspections during each year of the Federal Facility Multi Media Enforcement/Compliance Initiative. The guidance also provided a set of criteria for the Regions to use in targeting inspections of Federal facilities. The criteria were designed to be adjusted by the Regions to account for Region-specific factors. These criteria include:

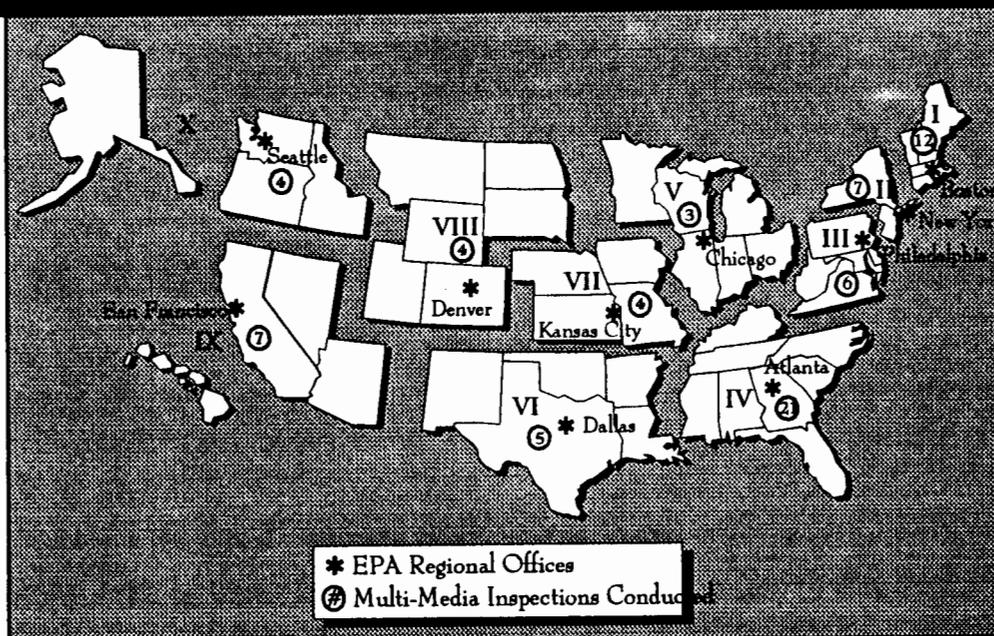
- compliance history;
- regional risk ranking (including NEIC ranking or other identified impacts to human health and the environment);
- other national, regional, or state environmental priorities/initiatives;
- environmental justice; and
- opportunities for pollution prevention.

Once the facilities are selected, the EPA Regional Federal Facility Coordinator, inspectors from EPA, and State media-specific environmental protection programs form teams and conduct the inspections. The team concept is designed so that facilities can:

- comprehensively evaluate environmental management and compliance performance;
- take advantage of combined expertise to identify pollutants that affect various environmental media; and
- identify pollution prevention opportunities.

In designing the Federal Facility Multi Media Enforcement Compliance Initiative, the Federal Facilities Enforcement Office consulted with EPA Regions, EPA Headquarters Program Offices, and State organizations. EPA issued inter-agency communication to other Federal agencies to launch the initiative, which produced tools and achieved effects consistent with Federal Facility Multi Media Enforcement/Compliance Initiative goals.

## FMECI National Highlights

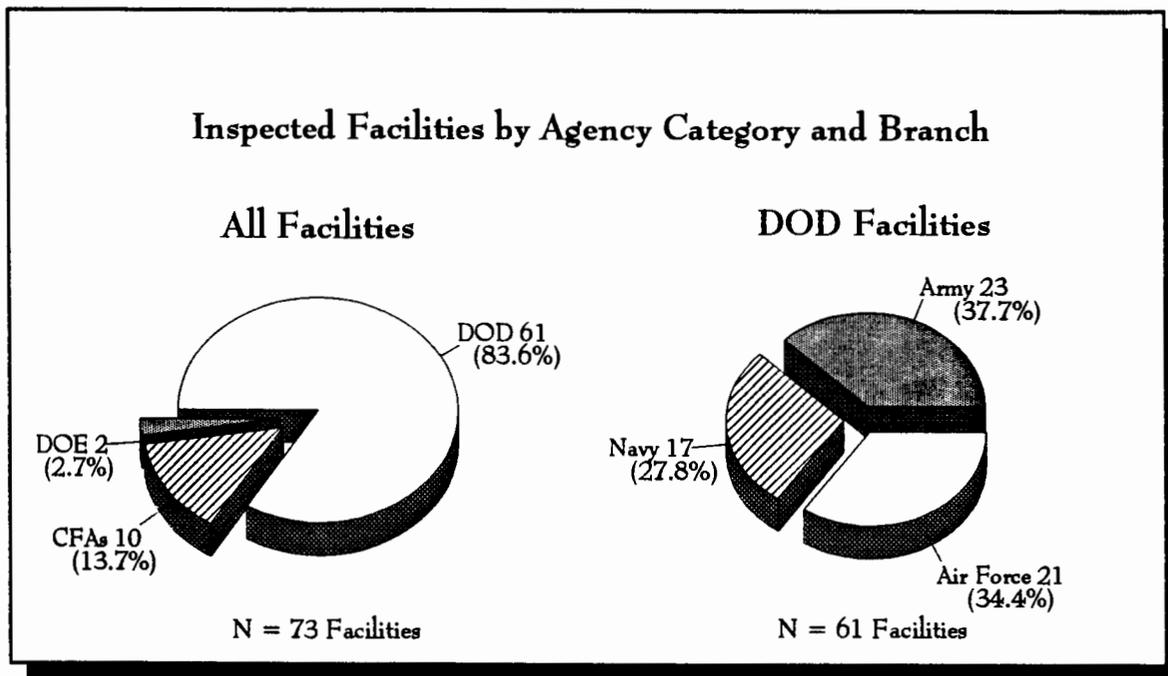


### 3.4 Federal Facility Multi-media Enforcement/Compliance Initiative Inspections

EPA conducted 73 multi-media compliance inspections during the Federal Facilities Multi-media Enforcement/Compliance Initiative (FMECI); 41 in FY 1993 and 32 in FY 1994. The number of inspections conducted ranged from three in Region V to 21 in Region IV. Most Regions conducted fewer inspections during the second year of the initiative, although Region IX increased its inspection activity from two in FY 1993 to five in FY 1994. Three other Regions (I, VII, and X) conducted the same number in both years. All Regions, except Region V, conducted an average of at least two inspections per year. Inspections were conducted in 35 States, two Territories, and the District of Columbia.

The Department of Defense (DOD) operates 61 of 73, or more than 83 percent, of the facilities examined during the Federal Facility Multi Media Enforcement/Compliance Initiative. The inspected DOD facilities include 21 Air Force, 17 Navy, and 23 Army installations. The remaining 12 inspected facilities include two Department of Energy laboratories and 10 Civilian Federal Agency (Civilian Federal Agencies) facilities (three NASA space flight centers, two Department of Agriculture research facilities, two Coast Guard installations, a Department of Justice penitentiary, and a Veterans Administration medical center). In addition, as requested by President Clinton in his Earth Day 1993 address, inspectors conducted a multi-media audit of the White House and Old Executive Office Building (referred to herein as the White House Complex).

Exhibit 1 presents inspected facilities by agency category (i.e., Defense, Civilian Federal Agencies, and the Department of Energy and branch of the military service).



#### 3.4.1 The majority of inspections occurred at Defense facilities.

EPA Regions classified most inspected facilities as medium-sized (62 percent) or large (34 percent), with the remainder (4 percent) being classified as small. Between FY 1993 and FY 1994, the percentage of medium-sized and small facilities increased slightly, while the share of large facilities declined by approximately five percent.

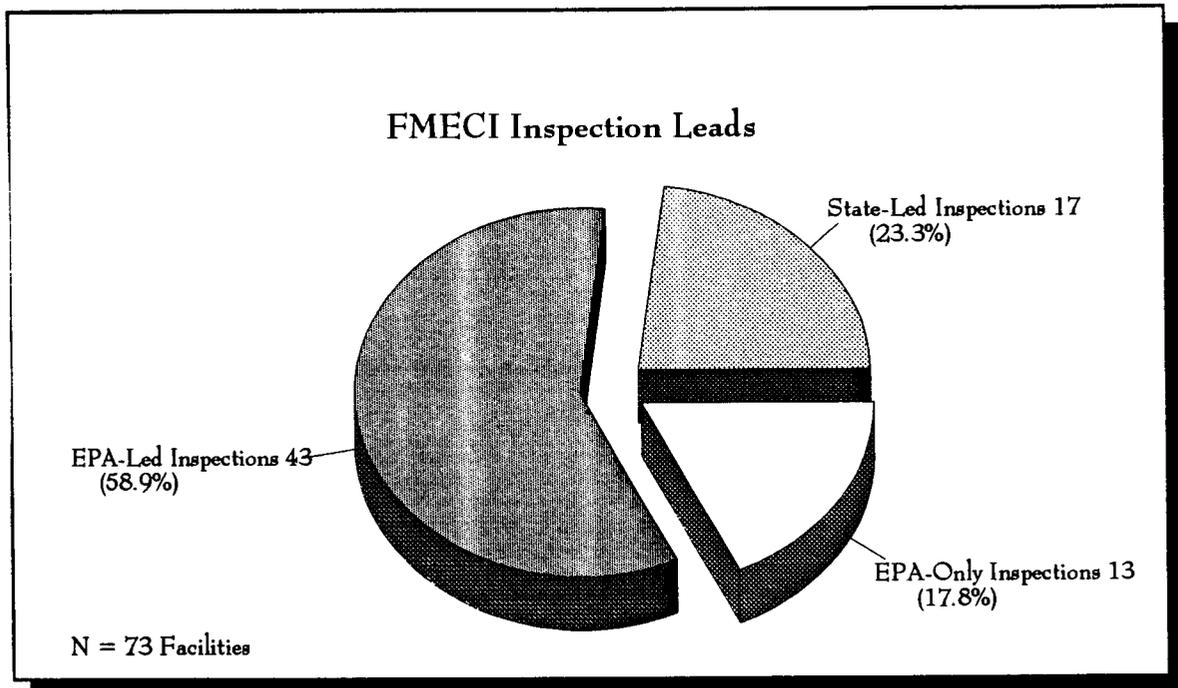
The intensity and level of resources devoted to the inspections varied somewhat across Regions and facilities; however, all inspections conducted under the Federal Facility Multi Media Enforcement/Compliance Initiative were either Category C or D. Overall, the Regions conducted slightly more Category D than Category C inspections, 39 and 34, respectively. Between the first and second years of the Federal Facility Multi Media Enforcement/Compliance Initiative, the number of Category D inspections increased slightly relative to the number of Category C inspections (in FY 1993, there were 21 Category D inspections and 20 Category C inspections).

Large facilities were slightly more likely to receive the more resource-intensive Category D inspections, while medium-sized facilities were subjected to nearly the same number of Category C and D inspections.

#### 3.4.2 EPA and the States conducted slightly more Category D than Category C inspections

Exhibit 2 presents a breakdown of multi-media inspection leads<sup>9</sup>. States assumed a lead role on 23 percent (17 of 73) of inspections conducted under the Federal Facility Multi Media Enforcement/Compliance Initiative. EPA-only inspections accounted for 18 percent (13 of 73), while EPA-led inspections, which include Regional and National Enforcement Investigation Center (NEIC)-led efforts, accounted for 59 percent (43 of 73).

Exhibit 2.



### 3.4.3 States played an active role in multi-media inspections

The level of State participation on inspection teams declined slightly between the first and second years of the Federal Facility Multi Media Enforcement/Compliance Initiative. In FY 1993, States participated in 88 percent (36 of 41) of inspections and acted as lead on 34 percent (14 of 41). During FY 1994, the State participation rate decreased to 75 percent (24 of 32) and State-led inspections dropped to only nine percent (3 of 32). For both years of the Federal Facility Multi Media Enforcement/Compliance Initiative, States participated in 82 percent (60 of 73) of the inspections and acted as lead on 23 percent (17 of 73).

### 3.5 Federal facility multi-media enforcement/compliance initiative enforcement actions

Inspection teams identified 115 violations warranting enforcement actions during the Federal Facility Multi Media Enforcement/Compliance Initiative. As of the publication of this Report, there are six additional enforcement actions pending. The issued enforcement actions consisted of:

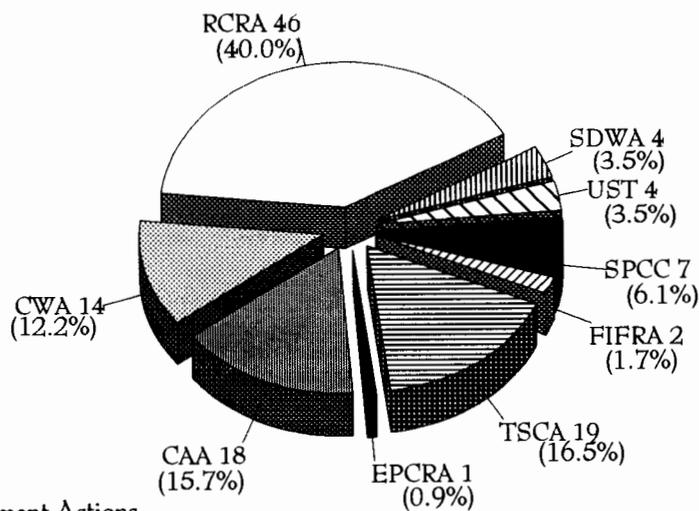
- warning letters;
- notices of violation (NOV);
- notices of noncompliance (NON);
- field citations;
- administrative orders; and
- federal facility compliance agreements.

The level of enforcement activity declined substantially between the first and second year of the Federal Facility Multi Media Enforcement/Compliance Initiative. In FY 1993, Regions and States issued 77 enforcement actions; in FY 1994, the figure was only 38, a decrease of almost 51 percent. Moreover, this decline cannot be entirely attributed to a reduction in the number of multi-media inspections. The number of enforcement actions per inspection decreased from 1.9 in FY 1993 to 1.2 in FY 1994.

Of the enforcement actions issued as a result of the Federal Facility Multi Media Enforcement/Compliance Initiative, 46 (40 percent) addressed Resource Conservation and Recovery Act violations. As can be seen in Exhibit 3 below, the four most frequently violated statutes warranting enforcement action (Resource Conservation and Recovery Act, Clean Air Act, Toxic Substance Control Act, and Clean Water Act) accounted for more than 84 percent of all such violations.

Exhibit 3.

### Enforcement Actions Taken According to Statute/Program

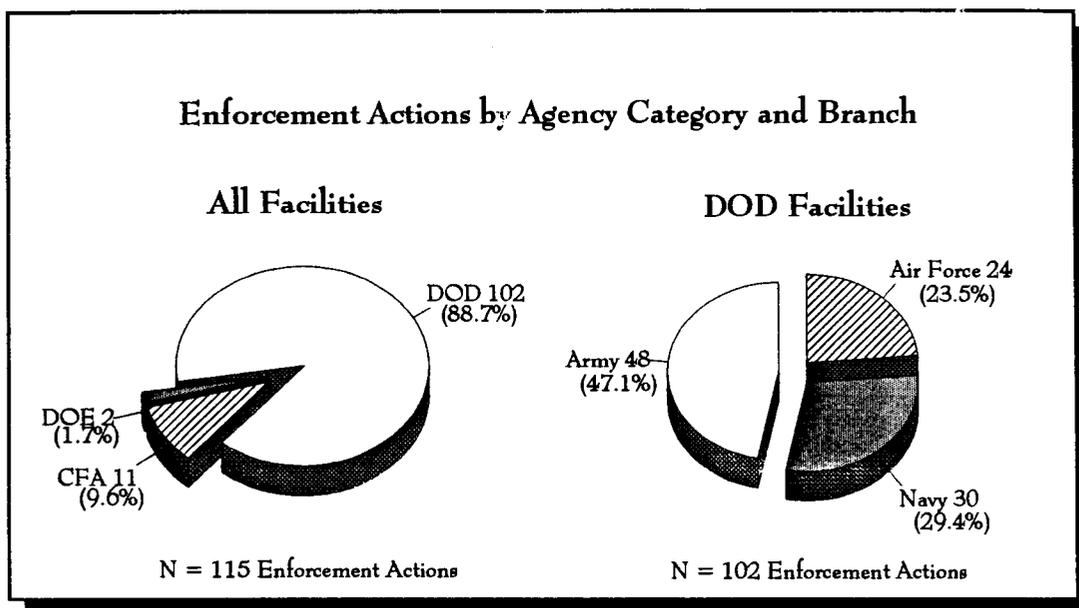


3.5.1 A total of 115 enforcement actions were taken under nine different statutes

The distribution of enforcement actions by statute is essentially the same for medium-sized and large facilities.<sup>10</sup> Navy, Army, and Air Force facilities had similar violation rates across statutes, although as a group they tended to receive more enforcement actions for Clean Air Act violations. Accordingly, Civilian Federal Agencies received Resource Conservation and Recovery Act, Toxic Substances Control Act, and Clean Water Act violations in the same relative proportions as the rest of the inspected facilities; however, they were not cited for any Clean Air Act violations.

Exhibit 4 presents enforcement actions according to agency category and branch of military service. Defense facilities accounted for the vast majority of the violations warranting enforcement actions during the Federal Facility Multi Media Enforcement/Compliance Initiative. In addition, the distribution of enforcement actions by agency category was fairly consistent with the distribution of inspections (see Exhibit 1); Department of Defense, Department of Energy, and Civilian Federal Agencies facilities received 88.7, 1.7, and 9.6 percent, respectively, of enforcement actions compared to 83.6, 2.7, and 13.7 percent, respectively, of multi-media inspections. Comparing these two exhibits also reveals that Army installations received a somewhat disproportionate share of enforcement actions relative to the other branches of the military; Army installations accounted for 37.7 percent of inspected Defense facilities, yet they received 47.1 percent of enforcement actions at Defense facilities. Air Force facilities received 34.4 percent of the inspections and 23.5 percent of enforcement actions, while Navy facilities received 27.8 percent of inspections and 29.4 percent of enforcement actions.

Exhibit 4.



### 3.5.2 Defense facilities received the majority of enforcement actions

Exhibit 5 provides additional detail on the specific types of enforcement actions taken to address violations of environmental statutes. Notice of Violations (NOV) were the most frequently issued enforcement action, accounting for almost 36 percent of the total. Administrative Orders and Warning Letters each comprised 23 percent of all enforcement actions.

Among the four most frequently violated statutes, NOV's comprised anywhere from 21 percent (Toxic Substances Control Act-TSCA) to 46 percent (Resource Conservation and Recovery Act) of actions issued under each statute. In percentage terms, Administrative Orders were most frequently issued under Resource Conservation and Recovery Act, while Warning Letters were most commonly issued under Safe Drinking Water Act and Clean Air Act. Notices of Noncompliance (NONs) accounted for two-thirds of toxic substance enforcement actions and Toxic Substances Control Act (TSCA) Notices of Noncompliance accounted for nearly 90 percent of all Notices issued during the Federal Facility Multi Media Enforcement/Compliance Initiative. It should be noted that the authority to issue all of these various enforcement actions does not exist under every environmental statute.

Between FY 1993 and FY 1994, there were no significant changes in the distribution of enforcement actions — Notice of Violations (NOVs), Administrative Orders, Warning Letters, and Notices of Noncompliance (NONs,) respectively, were the four most commonly issued enforcement actions.

**Exhibit 5. Type of Enforcement Actions by Statute/Program Violated**

Enforcement Action	Resource Conservation and Recovery Act	CWA	CAA	TSCA	FIFRA	SPCC	UST	EPCRA	SDWA	TOTAL
Warning Letter	7	4	7	0	0	3	1	0	4	26
NOV	21	5	7	4	1	2	1	0	0	41
NON	0	1	0	13	0	0	0	1	0	15
Administrative Order	18	3	4	1	0	0	1	0	0	27
Field Citation	0	0	0	0	1	0	1	0	0	2
FFCA	0	1	0	1	0	2	0	0	0	4
<b>TOTAL</b>	<b>46</b>	<b>14</b>	<b>18</b>	<b>19</b>	<b>2</b>	<b>7</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>115</b>

### 3.5.3 Notices of Violations (NOVs) accounted for more than one-third of enforcement actions under the Federal Facility Multi-media Enforcement/Compliance Initiative

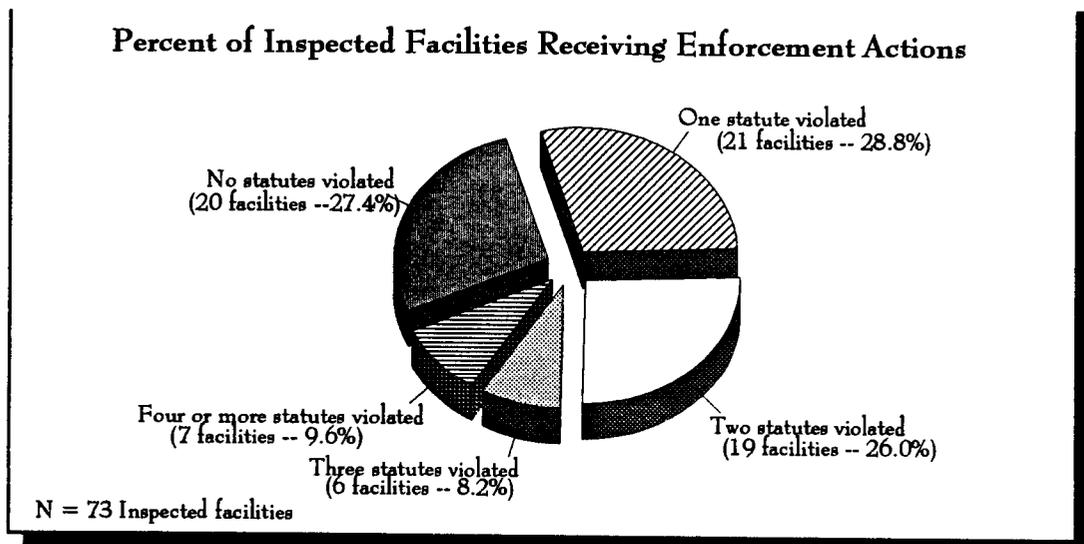
In all, EPA and States issued enforcement actions at approximately 73 percent (53 of 73) of the facilities they inspected. Region II issued the most actions, handing down 27 among seven facilities, with Region IV a close second at 26 actions. Region VII issued the fewest enforcement actions (three actions at four facilities).

### 3.5.4 On average, one multi-media inspection resulted in 1.6 enforcement actions

On a per inspection basis, Region II was the most active, issuing 27 enforcement actions against only seven facilities — an average of 3.9 violations per inspected facility. Regions VII and IX had the lowest averages, issuing 0.8 and 0.9 actions per inspected facility, respectively. Nationally, the average number of enforcement actions taken to address violations detected during a multi-media inspection was 1.6.

Exhibit 6 compares the number of facilities at which enforcement actions were taken to the total number of inspected facilities. Of the 73 facilities inspected, 27 percent (21 of 73) were not subjected to any enforcement actions and an additional 27 percent (21 of 73) received only one enforcement action. The remaining 44 percent (32 of 73) of inspected facilities were cited for violations of multiple environmental statutes. Among the inspected facilities receiving enforcement

**Exhibit 6.**



actions under the Federal Facility Multi Media Enforcement/Compliance Initiative, the median number of environmental statutes violated was two. Thus, the majority of Federal facilities cited for violations violated multiple statutes.

### 3.5.5 More than 40 percent of all inspected facilities violated multiple statutes

The type of enforcement actions taken and proposed or final penalties associated with EPA- and State-issued Administrative Orders and Field Citations may vary in each jurisdiction. Federal facilities located in seven of 10 EPA Regions were subject to enforcement actions in which EPA and/or States proposed penalties. As of September 30, 1995, the total amount of proposed

penalties was more than \$3.8 million. Final penalties issued were substantially lower — slightly less than \$575,000; however, proposed penalties of almost three million remain under review in four Regions.

In addition to participating on the inspection teams, States actively enforced requirements under the Federal Facility Multi Media Enforcement/Compliance Initiative. Of the 115 enforcement actions taken, States led 35 (30 percent). The level of State involvement in the enforcement phase of the Federal Facility Multi Media Enforcement/Compliance Initiative declined substantially from FY 1993 to FY 1994. In FY 1993, States took the lead on 35 percent (27 of 77) of enforcement actions, while in FY 1994, the State share was only 21 percent (8 of 38). In addition, the U.S. Army Corps of Engineers took the lead on a single enforcement action to address wetlands violations under the Clean Water Act at Aberdeen Proving Ground in Maryland. Exhibits 1-13 and 1-14 show how these State actions during the Federal Facility Multi Media Enforcement/Compliance Initiative were distributed among the various types of actions.

#### 3.5.6 Regions led nearly two-thirds of all enforcement actions; States led 30 percent

The average time required to initiate an enforcement action following a multi-media inspection ranged from less than two weeks to nearly fourteen months. In general, enforcement actions initiated and issued simultaneously (e.g., notices, warning letters) took less time to issue than did actions that involve a period of negotiation or opportunity for public comment between their initiation and issuance (e.g., Administrative Orders, Federal Facility Compliance Act - FFCAs).

#### 3.5.7 Most enforcement actions were issued within one year of the inspection

For those Regions reporting, the average time elapsed from inspection to report completion declined from approximately 5.1 months during FY 1993 to 3.7 months during FY 1994; thus, the average time required for the two-year period was approximately 4.6 months. Several Regions noted that multi-media inspections were resource intensive; however, only two Regions specifically observed that the time required to prepare the multi-media inspection reports may have delayed the issuance of enforcement actions.

Multi-media enforcement actions involve using a single enforcement action to collectively address violations under multiple environmental statutes. Most Regions did not actively pursue multi-media enforcement actions. Four Regions indicated that they had explored multi-media enforcement opportunities at inspected facilities, and only two Regions (II and V) issued enforcement actions addressing violations of multiple statutes. Regions cited the following reasons for the lack of substantial multi-media enforcement coordination:

- The discovered violations were straightforward, single-program violations.
- Parties who were encouraged to take multi-media enforcement actions saw no benefit that would off-set the extra time required to coordinate such an effort.
- Coordination was difficult because of varying levels of enforcement authorities and the lack of substantial violations.

### 3.6 Pollution prevention results from enforcement

Some Regions actively pursued pollution prevention remedies as an enforcement tool during the Federal Facility Multi Media Enforcement/Compliance Initiative, but most noted the importance of pollution prevention and the expectation that it would become more prominent in the future. Federal facilities in five Regions have either implemented pollution prevention Supplemental

Environmental Projects (SEPs) or at least explored their feasibility. In addition, three of these five Regions have included pollution prevention remedies and conditions into enforcement settlements. For example, Region I incorporated two separate pollution prevention remedies into settlements with the U.S. Coast Guard Boston Support Center. The remedies involved replacing two underground storage tanks (UST) with a single above ground dual compartment tank and construction of a new container storage area. The Region also successfully included Supplemental Environmental Projects as part of its enforcement settlement with the U.S. Army Natick Research Center. Similarly, Region IV required Air Force Plant #6 to submit a pollution prevention action plan, setting forth actions and dates for reduction of pollutants, as part of an enforcement action.

Several other Regions reported pursuing less formal pollution prevention strategies at inspected facilities. At least two Regions made specific pollution prevention recommendations that were later adopted by facilities, while another Region noted that immediately following a multi-media inspection, the facility initiated several pollution prevention measures. In FY 1993, six Regions provided Pollution Prevention Opportunity Profiles to facilities at the time of the inspections. During FY 1994, most Regions elected not to distribute the Profiles, citing their lack of up-to-date information. The Profiles identify processes, measures, operation and maintenance functions, and technologies that facilities can explore to prevent the creation or release of pollutants during facility activities. FFEO compiles the Profiles using a hybrid approach that combines facility mission and facility specific environmental data. Annex I contains a sample Profile.

### 3.7 Regional/state coordination

The level of Regional/State coordination shown by the Regions and States throughout the Federal Facility Multi Media Enforcement/Compliance Initiative was significant. Regions reported interaction levels between Regional and State offices as more intensive during the inspection and enforcement phases of the Federal Facility Multi Media Enforcement/Compliance Initiative than during the targeting phase.

#### 3.7.1 Regions need a fairly high level of involvement by States in Federal Facility Multi Media Enforcement/Compliance Initiative (FMECI) activities, particularly during the inspection and enforcement phases

Three Regions reported that no interaction occurred during the targeting of facilities; three reported a moderate level of interaction; and two reported a significant level. One Region noted a moderate-to-significant level of interaction during the targeting stage.

Five Regions reported significant coordination levels between EPA and States during the inspection stage, and three Regions described interaction during that stage as moderate. During enforcement, six Regions noted significant levels of interaction, two reported moderate levels of coordination, and one Region indicated that the level of interaction was not applicable.

States led enforcement efforts in approximately 30 percent (35 of 115) of enforcement actions. State actions most frequently consisted of Warning Letters, Notices of Violations, and Administrative Orders. Regions and the States exercised joint lead in four enforcement actions, an Notice of Violations in one Region and three Resource Conservation and Recovery Act §3008(a) Orders in another. Three Regions reported that State Enforcement Agreements (SEAs) enhanced States' ability to participate in Federal Facility Multi Media Enforcement/Compliance Initiative. The remaining Regions either did not report, or stated that State Enforcement Agreements did not affect State participation. One Region described the Agreement as providing a framework for joint inspections which facilitated coordination between Regional and State program staff. Another Region stated that the Agreements are beginning to include the multi-media enforcement concept. In contrast, another Region stated that it has not used the Agreement for many years.

Nine Regions reported benefits to State and Regional involvement, citing most frequently: enhanced communication; training opportunities; mutual understanding; cooperation; and sharing of data and technical assistance. The Regions reported other benefits including: thorough inspections; State familiarity with facilities as assisting Regions with inspections; joint assessment of compliance problems; improvement of State relationships; and opportunities for joint partnerships.

The Regions also reported several obstacles to Regional and State coordination. Two Regions named scheduling as a primary obstacle. Other obstacles included difficulty in identifying appropriate participants; the need to meet security and access requirements; extra time required for State enforcement decisions; difficulty in agreeing to "lead" responsibilities for delegated programs; and different inspection protocols (e.g., announced vs. unannounced inspections).

Seven of the Regions responding indicated that the Federal Facility Multi Media Enforcement/Compliance Initiative had no negative ramifications for Region/State relations. Of the two Regions that perceived problems, one cited different enforcement philosophies within EPA and the States. As an illustration, this Region referred to one State agency issuing a penalty to a facility, while another State agency issued a relatively mild enforcement action for a comparable violation at a different facility. Another Region noted that States do not perceive added value from multi-media inspections. According to this Region, the States would rather refer inspections to other program offices. The Region also stated that multi-media considerations delay enforcement actions. Exhibit 7 summarizes these benefits and barriers.

Between FY 1993 and FY 1994, the relationship between the States and several Regions improved. Enhanced communication, inspection coordination, and enforcement action involvement between Regions and States were reported by at least three Regions. Three other Regions reported no change in the Regional/State relationships. No Regions noted any deterioration with respect to any phase of the multi-media inspection/enforcement process.

### 3.8 Overall impact of multi-media inspections

Six of nine Regions responding stated that the Federal Facility Multi Media Enforcement/Compliance Initiative resulted in increased interest in using multi-media inspections, although one Region commented that it could allocate necessary resources for only a small number of inspections. The Regions viewed the inspections as an effective enforcement tool that expands the knowledge of inspectors.

#### Exhibit 7. Benefits/Barriers to Multi-media Inspection

<b>Benefits</b>
<ul style="list-style-type: none"> <li>• Encourages upper level management to focus on environmental compliance matters</li> <li>• Provides comprehensive compliance examination of facilities</li> <li>• Allows determination of strengths and weaknesses of facility environmental programs</li> <li>• Allows identification of technical needs of facilities</li> <li>• Provides Regions and States an opportunity to exchange information</li> </ul>
<b>Barriers</b>
<ul style="list-style-type: none"> <li>• Limited travel funds</li> <li>• Multi-media inspections can be time-consuming and require extensive resource, logistical, and decision-making coordination</li> </ul>

Relative to conventional single-media inspections, two Regions reported that multi-media inspections are more efficient, however, two other Regions noted just the opposite. The principal benefits and barriers associated with a multi-media inspection approach, as reported by the Regions, are presented in Exhibit 7.

Overall, the Regions perceived facilities involved in multi-media inspections to be professional, cooperative, and positive in responding to the Federal Facility Multi Media Enforcement/Compliance Initiative. Regions also noted that facility environmental staff often welcomed the inspections because the attention inspections brought to environmental management reinforced the importance of their efforts. Three Regions mentioned the effectiveness of the Federal Facility Multi Media Enforcement/Compliance Initiative in involving upper management staff at facilities and one Region noted the responsiveness of base commanders, stating that commanders frequently will send follow-up letters outlining the corrections made as a result of inspections.

Regions also described some of their concerns that arose during the implementation of the Federal Facility Multi Media Enforcement/Compliance Initiative. These ranged from potential difficulties incorporating multi-media inspections as a standard Regional program element once the Federal Facility Multi Media Enforcement/Compliance Initiative concludes, to concerns on the part of facility personnel about criminal liability associated with environmental violations discovered during inspections, and the effect these concerns could have on facility participation.

### 3.9 Summary

EPA's experience during the Federal Facility Multi Media Enforcement/Compliance Initiative reveals some of the immense potential benefits associated with multi-media inspections. Fully implemented, the multi-media approach can lead to significant improvements in environmental compliance at Federal facilities. Specifically, the Federal Facility Multi Media Enforcement/Compliance Initiative demonstrates the following:

- The 73 Federal Facility Multi Media Enforcement/Compliance Initiative inspections represent a significant investment in the Federal facility sector by EPA Regions and participating States.
- EPA and States issued 115 enforcement actions for violations under nine separate environmental statutes. Enforcement actions taken were appropriate to the significance of or level of non-compliance encountered at facilities.
- Nearly 45 percent of all inspected Federal facilities violated multiple statutes. Of the Federal facilities receiving enforcement actions, 62 percent violated more than one statute.
- EPA documented significant levels of and benefits from State involvement in the Federal Facility Multi Media Enforcement/Compliance Initiative.
- EPA's procedures and approach to conducting multi-media inspections can be effective, regardless of the size or operating agency of the facilities involved.

- Seven out of ten Regions proposed a total of more than \$3.8 million in penalties.
- EPA and States began to encourage facilities to adopt Pollution Prevention strategies as first choice measures to return to and maintain compliance.

## **4 INTEGRATING POLLUTION PREVENTION INTO COMPLIANCE PROGRAMS**

### **4.1 Background**

On August 3, 1993, President Clinton signed Executive Order 12856, entitled "Federal Compliance with Right-To-Know Laws and Pollution Prevention Requirements." This Order requires that federal agencies comply with the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and Pollution Prevention Act of 1990. Moreover, the Order sets a new standard for federal environmental excellence by extending this compliance requirement to many activities not currently monitored in private industry. In requiring compliance with the Act of 1986, the Executive Order reaffirms and strengthens the Federal Government's obligation as a responsible neighbor in communities where Federal facilities are located.

In addition to community right-to-know requirements, Executive Order 12856 also establishes the Administration's vision for federal government leadership in pollution prevention. The Order directs that federal agencies and facilities take steps to embrace pollution prevention as a government-wide ethic in the day-to-day management of federal facilities and sets ambitious goals for reducing or eliminating the release of toxic and hazardous pollutants from federal facilities into our Nation's environment. Moreover, the Order supports these goals by committing the federal community to modify acquisition and procurement practices by adopting pollution prevention as standard practice for government purchase of goods and services. Finally, the Order supports the continuing federal commitment to work with the private sector in the development, testing and implementation of innovative pollution prevention technologies.

To ensure that federal agencies and facilities fulfill the provisions of Executive Order 12856, the Order directs that all Federal agencies with "covered facilities" \* develop a strategy for implementation of the Executive Order. Sixteen federal agencies have prepared pollution prevention strategies that will direct implementation of the Executive Order at more than two thousand covered federal facilities.

### **4.2 Executive Order reporting requirements**

As previously stated, Executive Order 12856 establishes a requirement for Federal facility compliance with the Emergency Planning and Community Right-to-Know Act (EPCRA) and its various reporting requirements. For compliance with section 301 through 312 of this Act, the Executive Order calls for a reporting schedule similar to that set up for initial industry compliance and mirrors private sector time frames for annual reporting. The time frame for Federal facility reporting under section 313 of the Act also coincides with the reporting schedule established for private industry with the first reports due to be submitted by July 1, 1995. As previously noted, the Order applies the reporting requirements of the Act to federal facilities more broadly than current application in private sector industries. A discussion of applicable reporting requirements of this Act is provided below.

#### 4.3 Emergency planning and response

Emergency Planning and Community Right-to-Know Act (EPCRA) SECTIONS 302 AND 303: Pursuant to section 3-305 of the Executive Order, federal facilities must comply with section 302 and 303 by providing the State Emergency Response Commissions (SERC) and Local Emergency Planning Committees (LEPC) information necessary for planning community response to rare but potentially catastrophic events such as the release of hazardous chemicals during a facility accident.

SECTION 304: To provide for public notification of emergency releases of chemicals potentially harmful to the community, the Executive Order states that, effective January 1, 1994, Federal agencies are subject to the reporting requirements of section 304.

SECTIONS 311 and 312: To enhance community awareness of chemical hazards and provide information about the identity and amount of chemicals including storage conditions and locations, the Executive Order requires Federal facility compliance with sections 311 and 312.

SECTION 313: and 313 establishes a nationwide inventory of toxic chemical releases to all environmental media and provides affected communities and states with information about chemical releases into the community. While section 313 has been applicable to the private sector since 1987, the Executive Order now requires that federal facilities comply with the requirements of this section. Moreover, in directing federal facility compliance with this section, the Executive Order also removes qualifications which limit compliance by private industry primarily to facilities engaged in manufacturing. Federal facilities which meet applicable thresholds must submit section 313 and Pollution Prevention Act data on EPA Toxic Chemical Release Inventory Reporting Form R beginning with calendar year 1994 with the first submission due to EPA and the states on July 1, 1995.

##### 4.3.1 Agency strategy highlights

Prior to the Executive Order, the Department of Energy voluntarily complied with Section 313 of the Act at several of its facilities beginning in calendar year 1993. This leadership initiative provided a better understanding of the nature of toxic chemical releases from Federal facilities and provided an incentive to Department of Energy reporting facilities to attain many of the goals of the Executive Order before section 313 was applicable to federal agencies.

#### 4.4 Executive Order pollution prevention goals

To underscore the federal government's commitment to environmental leadership, the Executive Order directs that each Federal agency develop voluntary goals to reduce the agency's total releases and transfers of toxic chemicals by 50 percent by the end of calendar year 1999. The Executive Order establishes 1994 as the baseline year against which progress toward the agency-wide goal is measured and emphasizes that reductions should be achieved through source reduction practices. The Executive Order also allows agencies to expand the chemicals covered under the reduction goal to include other toxic pollutants in addition to chemicals identified as toxic chemicals under section 313.

A majority of federal agency pollution prevention strategies explicitly commit to the goal of a 50 percent reduction in the release and transfer of toxic chemicals from their facilities by the end of 1999. Further, many agency strategies endorse source reduction activities as the alternative of choice for facility pollution prevention improvements.

#### 4.5 Facility specific pollution prevention plans

The Executive Order directs that the head of each agency will ensure that its covered facilities develop a written pollution plan that sets forth the facility's contribution toward the agency 50 percent reduction goal. Facilities which do not report under section 313, and are therefore not likely to be included in the agency's baseline but are nevertheless "covered facilities" under the Executive Order, are also required to prepare pollution prevention plans. Covered facilities are defined in the Executive Order to include any Federal facility which meets one or more of the threshold requirements for reporting set forth in sections 302, 303, 304, 311, 312 or 313. The inventory of facilities covered under the Order encompasses nearly two thousand facilities from fifteen different federal agencies and includes more than twelve hundred civilian facilities. The plans that result from this requirement will assist federal facilities in assessing pollution prevention opportunities and will serve as a mechanism for ensuring facility management decisions fully consider and implement pollution prevention directives embodied in agency strategies. EPA has prepared a document entitled Federal Facility Pollution Prevention Planning Guide, to assist agencies in complying with this aspect of the Executive Order.

Nearly all of the federal agency pollution prevention strategy documents include an agency commitment to ensure development of facility specific pollution prevention plans for covered facilities and most strategies direct facilities to conduct formal facility pollution prevention opportunity assessments to enhance the effectiveness of the plan.

#### 4.6 Compliance through pollution prevention

The Executive Order states that the federal agency pollution prevention strategies should reflect the federal government's commitment to utilize pollution prevention through source reduction, where practicable, as the primary means for achieving and maintaining compliance with Federal, State and local environmental requirements. This provision serves to ensure that where practicable, agencies and facilities endorse and implement policies and practices which seek to prevent pollution that results in non compliance with environmental requirements. As such, pollution prevention is the alternative of first choice in achieving compliance with new environmental regulations or requirements, ensuring compliance with existing regulations and requirements, and returning to compliance when violations are identified.

Each of the federal agency strategies includes a specific commitment to pollution prevention as the primary means of achieving and maintaining compliance with environmental requirements.

#### 4.7 Pollution prevention in acquisition and procurement and facility management

The Executive Order states that federal agency pollution prevention strategies must reflect a commitment to pollution prevent through source reduction at the facility management and acquisition level. This facility level directive ensures that consideration of pollution prevention is incorporated into the routine of federal facility management decisions. This commitment to pollution prevention "at the source" is a cornerstone of the Executive Order and not only prevents pollution and conserves natural resources but also reduces wastes and creates markets for environmentally sound products and technologies. Further, integrating pollution prevention concepts such as total cost accounting and life cycle analysis into the acquisition and procurement process underscores the economic benefit of pollution prevention that should be recognized as a standard component of fiscal responsibility and proper federal facility management.

Like the endorsement of pollution prevention for achieving and maintaining compliance with environmental requirements, all of the federal agency pollution prevention strategies contain a commitment to pollution prevention in both facility management and acquisition.

#### 4.8 Development, testing and support of innovative pollution prevention technologies

Executive Order 12856 calls for federal leadership in supporting innovative pollution prevention technologies and programs and develop strong market incentives for those programs and technologies. The Executive Order encourages Federal agencies to develop partnerships with other federal agencies and with other groups such as industry and academia for the development and implementation of pollution prevention technologies. This provision of the Executive Order recognizes the unique role of the federal community as both a national leader in pollution prevention research and development and the Nation's single largest consumer of goods and services.

Over half of the federal pollution prevention strategies contain specific commitments endorsing the development, testing and support of innovative pollution prevention technologies and programs.

#### 4.9 Involving the public in planning and decision making

Public involvement, open communication and a general good neighbor approach from Federal facilities are basic tenets of the Executive Order. To support these goals beyond the reporting requirement of the Act, the Executive Order encourages Federal agencies to involve the public during the preparation of agency strategies and plans related to the Executive Order and in monitoring the progress toward meeting the goals established by agency strategies and plans.

The General Services Administration pollution prevention strategy commits the agency to conduct community-wide environmental conferences highlighting compliance with the Executive Order at their facilities, other federal facilities and private industry.

**AGENCY COMMITMENTS BEYOND COMPLIANCE:** While the Federal agency pollution prevention strategies discussed in this summary were prepared in response to provisions of Executive Order 12856, many federal agencies took the opportunity to delineate agency intentions for compliance with other environmental Executive Orders and outline improvements in agency and facility environmental management and policy. The summary for each agency provides a review of the strategy elements beyond compliance with Executive Order 12856. Below are highlights of efforts and proposals that are similar.

**NATURAL RESOURCE CONSIDERATIONS:** While Executive Order 12856 clearly embraces protection of natural resources through conservation, pollution prevention activities also reduce potential adverse environmental impacts to natural resources. Several federal agencies pledged to further pursue natural resource protection through limiting the use of pesticides and applying integrated pest management techniques at federal facilities.

#### 4.10 Implementation of Executive Order 12856 — accomplishments

**INTERAGENCY POLLUTION PREVENTION TASK FORCE** In accordance with the Executive Order, a Task Force has been formed to ensure appropriate and uniform implementation of the Executive Order. The Interagency Pollution Prevention Task Force is composed of senior level representatives from the Central Intelligence Agency, Departments of Agriculture, Defense, Energy, Health and Human Services, Interior, Justice, Transportation, Treasury, Veterans Affairs, Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, Smithsonian Institution, Tennessee Valley Authority, and US Postal Service

as well as the Federal Environmental Executive Office and representation from the Office of Federal Procurement Policy at OMB. The Task Force meets four times a year and has endorsed several actions described below.

**INTERAGENCY POLLUTION PREVENTION TASK FORCE CHARTER:** Through a group established by the Task Force, a Charter has been prepared which delineates the roles and responsibilities of the Task Force in implementation of the Executive Order. The Charter provides each agency an opportunity to formally recognize the goals of the Executive Order and pledge to faithfully implement the provisions of the Order.

**GUIDANCE AND IMPLEMENTATION ASSISTANCE:** In coordination with other agencies on the Interagency Task Force, EPA has prepared and released general guidance for implementation of Executive Order 12856. Additionally, EPA has prepared assistance documents focusing on Federal agency pollution prevention strategies and facility level plans required by the Executive Order. In the fall of 1995, EPA will release a document designed to assist field level personnel in addressing life cycle accounting concepts at the facility level.

**ENVIRONMENTAL MANAGEMENT:** EPA has prepared a draft of the "Code of Environmental Principles," called for in section 4-405 of the Executive Order as part of the "Federal Government Environmental Challenge Program," and has circulated that document to other agencies for review and comment.

**EFFECTIVE IMPLEMENTATION** A work group established by the Task Force has prepared a plan to address crosscutting Federal management issues which affect implementation of the Executive Order. The work group is capitalizing on the collective knowledge and resources of the 16 Task Force agencies to ensure a coordinated and effective effort. The Task Force has established subcommittees composed of representatives from the various Task Force member agencies to assist in implementation of specific aspects of the Executive Order. The following is a list of each subcommittee:

- revising acquisition and procurement procedures;
- coordination pollution prevention research and development and technology diffusion;
- information transfer and technical solutions;
- standardize method for data gathering for Executive Order 12856;
- outreach and showcase federal governments progress on Executive Order 12856 and pollution prevention;
- substitute chemicals and alternative processes; and
- training.

## **5 FUTURE DIRECTION OF EPA'S FEDERAL FACILITY ENFORCEMENT PROGRAM AND CONCLUSIONS**

EPA is committed to continually improving the performance of Federal facilities in protecting human health and the environment, not only through traditional enforcement activities, but through the use of innovative compliance assurance and assistance efforts. EPA's federal facilities enforcement program has a sector orientation, uses strong enforcement combined with compliance

assistance, and promotes pollution prevention and multi-media enforcement. The Office of Environmental Compliance Assurance's Federal Facilities Enforcement Office (FFEO) manages a national program to ensure that Federal facilities and government-owned-contractor-operated facilities conduct their activities in an environmentally sound manner and comply with all applicable environmental statutes and regulations.

The Federal facilities enforcement program will emphasize these major program areas in FY 1996: environmental reinvention activities at Federal facilities; implementation of a multi-media enforcement strategy, including targeted multi-media inspections, to improve Federal compliance rates; work with other Federal agencies and States to assist agencies in adopting and implementing environmental management standards in their operations, using "model facilities," as examples of how to review and improve current practices, e.g., pollution prevention, at Federal facilities.

In FY 1996, EPA will continue to emphasize aggressive enforcement of environmental use its authority under the 1992 Federal Facilities Compliance Act against federal facilities. The Agency will build on our successes in calendar 1995, and build on its Federal Facility Compliance Act efforts in regard to civilian Federal agencies (Civilian Federal Agencies), as exemplified by four major cases in calendar 1995 involving the Agriculture Department, the Bureau of Indian Affairs, the Bureau of Reclamation, and the Bureau of Land Management.

In FY 1996, along with our emphasis on traditional enforcement against Civilian Federal Agencies, EPA will focus on special assistance to Civilian Federal Agencies which have less expertise, through implementation of the new EPA Civilian Federal Agencies Environmental Improvement Strategy and by conducting Environmental Management Reviews at Civilian Federal Agencies facilities.

EPA will work with Federal agencies through Project XL/ENVVEST to ease requirement burdens for environmental compliance — reduce less significant requirements (e.g., record keeping, labeling, etc.) and focus on those activities that achieve high-level environmental results. This initiative is a partnership to test affirmative environmental management strategies at selected DOD facilities. A major focus will be on near-term investments in pollution prevention approaches that reduce compliance and clean-up costs in the long run. It is always cheaper, and cleaner, to prevent pollution in the first instance, instead of dealing with it after-the-fact. XL/ENVVEST is an exciting opportunity to try management alternatives at federal facilities that will seek to achieve better environmental results at less cost to the taxpayer.

In July 1994, Administrator Browner announced the Common Sense Initiative to mark a new approach to environmental protection at EPA. The overall goal of this Initiative is to identify and implement cheaper, and smarter, means of pollution prevention and environmental compliance, while ending up with a cleaner environment. The primary theme of the CSI Initiative is "Cleaner-Cheaper-Smarter" environmental protection:

- **Cleaner** because EPA will require participating industries to commit to improving their environmental performance to show real, measurable environmental protection.
- **Cheaper** because EPA is committed to looking for opportunities to increase flexibility in its regulations, compliance assurance and permitting programs.
- **Smarter** because cleaner, cheaper environmental management is a winning proposition for everyone.

Six industrial sectors are participating in Phase I of the Initiative: Auto Assembly, Computers and Electronics, Iron and Steel, Metal Plating and Finishing, Oil Refining, and Printing.

The Common Sense Initiative represents a commitment by all of the participants, both from government and from the private sector. It is a commitment to do better — to write our regulations better, to understand and comply with them better, and to better achieve real reductions in pollution, which will benefit us all.

One way to be smarter, and cleaner, is to anticipate problems before they occur, identify them when they do, and correct them right away. This approach makes sense for business and government alike. After all, the most effective place to ensure compliance is at the source. EPA's Environmental Leadership Program is working with selected private, and federal, facilities, to pilot ways of enhancing compliance. These demonstration pilot projects will show new, and sound, ways of self-policing - of checking the system, and fixing anything that is broken. This is truly a partnership between the EPA and the participating facilities, to show that compliance assurance is a two-way street.

Two federal facilities have been selected to participate in the first phase of our Environmental Leadership Program. At the McClellan Air Force Base in California, the base will develop and share multi-media inspection protocols which will improve environmental management systems in both federal facilities and in industry. At the Puget Sound Naval Shipyard, they will conduct assessments of pollution prevention opportunities. Both of these projects will help us, the federal government, be a true leader in the field of environmental compliance and protection.

The Penalty Incentive Policy for Self-monitoring, Disclosure, and Correction, commonly known as the "Audit Policy" allows the regulated community to take responsibility for themselves, and make sure that they comply with the laws. The goal of the policy is simple: EPA wants to promote responsible behavior by the regulated community. Self evaluation, disclosure, and prompt correction make sense for business, make sense for government, and make sense for the environment.

One way that we will promote responsible behavior and compliance with the law is by maintaining strong enforcement. Federal laws and regulations set minimum standards for protecting human health and achieving environmental protection goals such as clean air and clean water. EPA will continue to uphold these laws through tough enforcement actions that appropriately penalize violators.

The new policy is based on several principles:

1. Self-policing by regulated entities can play a crucial role in finding, fixing and preventing violations.
2. Violations discovered through self-policing should be disclosed and promptly corrected.
3. Regulated entities that self-police and that self-disclose and self-correct violations should, in appropriate circumstances, pay penalties that are consistently and predictably lower than penalties for those who do not.
4. Regulated entities that self-police and self-disclose and self-correct violations should, in appropriate circumstances, also not have to fear prosecution for criminal violations.
5. Providing predictable rewards for voluntary disclosure and correction of violations identified through self-policing is a positive alternative to establishing new statutory privileges that promote secrecy, expand litigation and compromise enforcement actions.
6. EPA should not seek information obtained by regulated entity solely through an audit to trigger an investigation of a civil or criminal violation of environmental laws.

7. The Agency should encourage innovation by states while ensuring that federal laws are fairly and consistently enforced.

Finally, we will continue our emphasis on the development and implementation of pollution prevention techniques. By providing assistance which promotes pollution prevention, and encouraging pollution prevention projects in the litigation context, we are helping to build the capacity of federal facilities to move toward cleaner, cheaper and smarter methods of environmental management. EPA will continue to take a leadership role in implementing the Pollution Prevention and Right-to-Know Executive Order.

The Federal Facilities Enforcement Office has grown from its original Resource Conservation and Recovery Act/Comprehensive Environmental Response, Compensation & Liability Act focus into a sector based multi-media office. We are committed to working with our sister agencies to address their environmental problems and to make our government an environmental leader as envisioned by the Integrated Management Strategy. Our role as the Federal Government's principal environmental regulator and enforcer demands this.

Combining traditional enforcement and compliance assistance, and the host of approaches in between, provides the Office of Enforcement and Compliance Assurance with unique opportunities and challenges. EPA must continue strong enforcement of the environmental laws. The Agency's enforcement program helps ensure the integrity of all of the Federal government's programs and missions.



## **ANNEX 1**

### **GUIDE TO POLLUTION PREVENTION OPPORTUNITIES AT NAVAL BASE USA (NBU)**

As part of the Federal Facilities Multi-media Enforcement/Compliance Initiative (FMECI), the EPA Federal Facilities Enforcement Office (FFEO) is providing this guidance package to assist enforcement personnel in identifying and documenting pollution prevention (P2) opportunities that can be incorporated into settlement agreements with the above-mentioned Federal facility. This package consists of two parts: a "Federal Facility Pollution Prevention Field Reporting Form" (Attachment A), and a "Pollution Prevention Opportunities Profile" (Attachment B). Both of these parts are specifically prepared for use at the above-mentioned Federal facility.

#### **Part I. Federal Facility Pollution Prevention Field Reporting Form**

The field reporting form presented in Attachment A provides a mission statement for the facility, which can be used by inspectors to predict the types of processes and wastes that may be present at the facility. In addition, this reporting form provides a consistent format for inspectors to record information on pollution prevention activities and opportunities at the facility. Parts I through IV of this form are provided by the Federal Facility Enforcement Office (FFEO), and include the facility name, address, and identification number, and a facility mission statement. Parts V through VIII are filled out by the inspector, and are to be maintained as part of the inspection record.

Part V.A is used by the inspector to record information about wastes that may present opportunities for pollution prevention. Part V.B allows inspectors to record the types of pollution prevention opportunities that they know or suspect are relevant to each waste identified in V.A. Inspectors may use the Pollution Prevention Opportunities Profile (Attachment B) as an aid in completing Part V of the field reporting form.

Part VI of the field reporting form allows the inspector to record detailed information about ongoing pollution prevention activities at the subject facility. This information may be used by EPA to propose the wider application of certain pollution prevention techniques implemented at the facility.

Part VII of the field reporting form allows inspectors to record violations occurring at those waste generation activities that have pollution prevention potential as determined pursuant to Part V of the field reporting form. These types of violations may allow the EPA to introduce pollution prevention requirements into settlement agreements.

Part VIII of the field reporting form allows inspectors extra space to nominate one or more pollution prevention opportunities at the subject facility that are most likely to be incorporated into a settlement agreement.

#### **Part II. Federal Facility Pollution Prevention Opportunity Profile**

The Federal Facility Enforcement Office investigated a number of EPA information sources to identify potential pollution prevention opportunities at Naval Base USA (NBU). These sources and the types of data they provided are listed below:

- Resource Conservation and Recovery Act 3016 database: Annual quantities for each Resource Conservation and Recovery Act hazardous waste.
- Aeronomic Information Retrieval System (AIRS) database: Annual quantities of Federal air pollutants.

- Permit Compliance System (PCS) database: Annual quantities of Federal water pollutants.
- Resource Conservation and Recovery Act Biennial Reporting System (BRS) database: Types and annual quantities of hazardous wastes.
- Toxic Release Inventory System (TRIS) database: NBU was not found on this database.

Data from the above-mentioned sources were used to prepare the profile for Naval Base USA which is presented in Attachment B. This profile does not represent all wastes that may have pollution prevention potential at Naval Base USA. Furthermore, this profile may include wastes that have little or no potential for pollution prevention. This profile was prepared to provide the inspectors with an initial list of wastes that, based on data from the above-mentioned sources and the information depicted by the facility mission, appear to present the best opportunities for pollution prevention. The inspector is encouraged to investigate these potential opportunities during upcoming inspections. If the opportunities in the profile are confirmed during the inspection, the inspector should obtain as much additional information as possible on these opportunities and record all such findings in Parts V through VIII of the field reporting form (Attachment A).

**Attachment A  
Federal Facility Pollution Prevention Field Reporting Form**

I. Facility Name: Naval Base USA

II. Facility Address (City, State) Anytown, Alaska

III. EPA ID No.: AK 1240098136

IV. Mission Description: Naval Base USA is involved in the overhaul and maintenance of surface ships up to attack carriers, attack submarines, and ballistic missile submarines. NBU services include conversion, overhaul, repair, alterations, and drydocking. The base also provides support for air and submarine warfare weapons systems. NBU is the homeport to an aiResource Conservation and Recovery Actft carrier, two cruisers, and two ammunition ships. NBU occupies 1,760 acres in Anytown, Alaska, and employs approximately 16,200 permanent staff (270 officers, 4,390 enlisted personnel, 11,520 civilians, and 20 students).

V. Wastes with P2 Potential (observed):

A. Waste Description (include waste sources, <sup>12</sup> chemical compositions, physical properties, and quantities)	B. P2 Opportunities (See Attachment B)
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**VI. Current P2 Activities**

**A. Waste Description (Sources and Quantities)**

**B. Initiative Description**

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**VII. Violations affecting Waste Sources with P2 Potential (see Part V of this form):**

**A. Waste Source**

**B. Violation**

**C. Status of Violation**

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**VII. Recommendations for Modifications to Current Programs**

**Attachment B: Federal Facilities  
Pollution Prevention (P2) Opportunities Profile at Naval Base USA (NBU)**

Waste Description <sup>13</sup>	EPA 33/50 Program Target (Y/N) <sup>14</sup>	Annual Waste Quantity	Assumptions on Waste Origin and/or Composition <sup>15</sup>	Potential Pollution Prevention Opportunities	Data Source <sup>16</sup>
Spent hydraulic fluid (propylene glycol)	N	1.55 tons (1989)	Hydraulic fluid drained from equipment during routine service	<ul style="list-style-type: none"> <li>• Determine whether hydraulic fluid can be replaced in the equipment after servicing has been completed</li> <li>• Identify secondary uses for spent hydraulic fluids</li> </ul>	BRS
Ignitable wastes (D001)	N	6.6 tons (1989)	Mineral spirits from degreasing operations	<ul style="list-style-type: none"> <li>• Minimize rates of solvent use</li> <li>• Replace organic solvents with water-based solvents</li> <li>• Extend solvent life by filtering or setting accumulated solids</li> </ul>	BRS

Waste Description	EPA 33/50 Program Target (Y/N)	Annual Waste Quantity	Assumptions on Waste Origin and/or Composition	Potential Pollution Prevention Opportunities	Data Source
Spent isopropyl alcohol (D0001)	N	3 tons (1989) of spent isopropyl alcohol from 8 sources and 0.45 tons of a solution containing hydrochloric acid, isopropanol, and xylene from 2 sources	Degreasing agents for electronic equipment	<ul style="list-style-type: none"> <li>• Explore on-site recycling (distillation, filtration, or other means)</li> <li>• Minimize rate of solvent use</li> </ul>	BRS
Mixtures of spent xylene, methyl isobutyl ketone, and toluene	N	59.18 tons (1989) from 15 sources	Degreasing agent or waste paints, paint thinners, and other materials	<ul style="list-style-type: none"> <li>• Explore on-site recycling (distillation, filtration, or other means)</li> <li>• Minimize rate of solvent use</li> </ul>	BRS and PCS
Cyanide wastewater containing cadmium and chromium, as well as chromium wastewater	I	2198 tons (1989)	Rinse water from electroplating operations	<ul style="list-style-type: none"> <li>• Install countercurrent rinsing</li> </ul>	BRS and PCS
Acid mixtures contaminated with metals	N	140 tons (1989)	Spent acids from cleaning operations	<ul style="list-style-type: none"> <li>• Use spent acids to neutralize spent caustics</li> <li>• Extend life of acid baths through setting or filtration</li> <li>• Use mechanical cleansing or replace acids with hot water or biodegradable detergents</li> </ul>	BRS and PCS
Mixtures of methylene chloride, xylene, methyl isobutyl ketone, and metals (D005, F002, F003, and F005)	I	28 tons (1989); one waste stream accounted for 17.8 tons in 1989	Paint stripping wastes	<ul style="list-style-type: none"> <li>• Eliminate all nonessential paint stripping operations</li> <li>• Replace oil-based paints with water-based paints</li> <li>• Adjust painting operations to minimize waste of paint</li> <li>• Recycle organic paint strippers</li> <li>• Use mechanical paint strippers</li> </ul>	BRS and PCS

Attachment B (continued)

Liquid cleaners containing metals (D006, D007, D008, and D010)	Y	82 tons (1989) from 4 major sources (18-23 tons/year each)	Degreasing	<ul style="list-style-type: none"> <li>Eliminate nonessential cleaning operations</li> <li>Replace halogenated degreasers with nonhalogenated degreasers</li> <li>Switch to less volatile degreasers and cleaners</li> </ul>	BRS and PCS
Lead work debris (D006, D007, D008, and D010)	Y	25 tons	Scrap lead	<ul style="list-style-type: none"> <li>Send to an off-site secondary smelter</li> </ul>	BRS and PCS
Waste Description	EPA 33/50 Program Target (Y/N)	Annual Waste Quantity	Assumptions on Waste Origin and/or Composition	Potential Pollution Prevention Opportunities	Data Source
Activated carbon contaminated with metals (D007 and D011)	N	0.5 tons	None	<ul style="list-style-type: none"> <li>Send to an off-site carbon recycler</li> </ul>	BRS and PCS
Volatile organic compounds (VOCs) from surface coating operations (acetone, methyl ethyl ketone, naphtha, and xylene)	Y	87.23 tons (1991)	None	<ul style="list-style-type: none"> <li>Eliminate all nonessential surface coating operations</li> <li>Change to water-based paints whenever possible</li> </ul>	AIRS

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**ENDNOTES AND REFERENCES**

1. The strategy was originally outlined in former Deputy Assistant Administrator Tad McCall's paper presented in proceeding's from the September 22-25, International Conference on Environmental Enforcement, Budapest, Hungary
2. See, Final Enforcement Guidance on Implementation of the Federal Facility Compliance Act, March 1996.
3. The Resource Conservation Recovery Act's (RCRA) principle objective's are to:
  - Protect human health and the environment from potential adverse effects of improper solid and hazardous waste management; and
  - Conserve material and energy resources through waste recycling and recovery; and reduce or eliminate the generation of hazardous waste as expeditiously as possible.
  - To achieve these objectives, the Resource Conservation Recovery Act (RCRA) regulates the generation, treatment, storage, transportation, and disposal of hazardous waste (cradle to grave management system).
4. H.Rep No. 102-886, 102nd Cong., 2nd Sess., p. 19 (1992). See also H.Rep. No. 102-111, 102nd Cong., 1st Sess., p.2 (1991); S.Rep. No. 102-67, 102nd Cong., 1st Sess. p.1 (1991).
5. See § 102(b)(1) of the Act, 42 U.S.C. Sec. 6961(b)(2). This contrasts with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) which provides response authority and administrative order authority to the President. In order to determine who has been delegated the authority from the President for the particular responsibilities under this Act, it is necessary to consult Executive Order No. 12580.
6. See § 102(a)(3), 42 U.S.C. Sec. 6961(a)(3)
7. While states also have the authority to assess penalties against Federal agencies under the Act, states are not necessarily required to use the 1990 Resource Conservation Recovery Act Civil Penalty Policy, but should assess penalties in accordance with state practices. EPA encourages states to use this new authority. As is done in actions against private parties, the Agency can work with those states without administrative penalty authority to assess penalties under the Agency's authority.
8. Because the Anti-Deficiency Act, 31 U.S.C. Sec. 1341, makes payments by federal agencies subject to the appropriation funds by Congress, there might be unique payment issues that arise with regard to payment of penalties by such agencies. Under the Resource Conservation Recovery Act Civil Penalty policy, the burden regarding ability to pay will reside with the Federal agency, as Respondent. If the Federal agency demonstrates that it cannot pay due to the Anti-Deficiency Act, the Regions should require that the particular Federal agency agree to request additional funds from Congress. In addition, EPA may include an acceleration clause in any payment schedule which is agreed to be the parties.

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9. For the purposes of this Report, a State or EPA is considered the multi-media inspection lead if it acts as the lead agency on the majority of individual environmental media components of the multi-media inspection.
  10. Small facilities comprise too small a portion of the universe of inspected facilities to draw any meaningful conclusions regarding the distribution of enforcement actions by statute.
  11. Penalties are not generally associated with the Federal Facility Compliance Act's Notices of Violations (NOVs), Notices of Noncompliance, or Warning Letters.
  12. Waste source description should include the location of the waste generating activity (e.g., building number), and the process that generates the wastes (e.g., degreasing of aircraft motor parts).
  13. Waste descriptions are derived from the data sources provided in the last column of this matrix. Resource Conservation and Recovery Act wastes in reported quantities below 500 lbs (0.25 tons) per year are not included in the matrix. No limits were placed on waste generation quantities for non-Resource Conservation and Recovery Act Wastes.
  14. A voluntary national program to reduce releases of pollutants and off-site transfers of 17 toxic chemicals by 33 percent by the end of 1992 and 50 percent by the end of 1995. Y=Yes; N=No; I=Insufficient Data. (the 17 chemicals include: benzene, cadmium and cadmium compounds, carbon tetrachloride, chloroform; chromium and chromium compounds; cyanide and cyanide compounds; lead and lead compounds; mercury and mercury compounds; methylene chloride; methyl ethyl ketone; methyl isobutyl ketone; nickel and nickel compounds, tetrachloroethylene; toluene, 1,1,1-trichloroethylene; and trichloroethylene.)
  15. Assumptions based on professional judgment.
  16. BRS=Resource Conservation and Recovery Act Biennial Reporting System; AIRS=Aeronomic Information Retrieval System; and PCS=Permit Compliance System.



## SPECIAL TOPIC WORKSHOP D

### Compliance Monitoring

Workshop D discussions build on the description of compliance monitoring techniques and programmatic approaches in the "Principles of Environmental Compliance and Enforcement" text, the UNEP training manual, papers published in the Proceedings of the second International Conference, Theme #3, "Developing an Effective Compliance Monitoring Capability (e.g., Inspection Capability)," and a new capacity-building technical support document prepared for this Fourth International Conference on Source Self-Monitoring, Recordkeeping, and Reporting.

The workshop provided an additional opportunity for discussion of the design issues touched upon on Day Three workshops as well as an opportunity for discussion of country-specific problems.

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See related papers from other International Workshop and Conference Proceedings:

1. Norway's Experience in Building an Inspector Corps: Education and Financing, *G. Rodland, A. Miller*, Volume I, Oaxaca, México
2. Compliance Monitoring of Companies Marketing Chemical Substances in Sweden, *K. Thoran, K. Siirala*, Volume I, Oaxaca, México
3. Environmental Inspection in Transition in the Czech Republic, *V. Meznicky*, Volume I, Oaxaca, México
4. Monitoring Industrial Emissions: A Successful Instrument for Environmental Enforcement, *M. Pütz*, Volume I, Oaxaca, México
5. Compliance Monitoring in Nigeria's Industries, *M. T. Odubela and I. I. Omoniyi*, Volume II, Oaxaca, México

6. Developing an Effective Compliance Monitoring Capability, *M. Bierman-Beukema toe Water*, Volume I, Budapest, Hungary
7. Integrated Licensing, Implementation and Compliance Monitoring in Developing Countries, *J. Aloisi de Lardere*, Volume I, Budapest, Hungary
8. Compliance Monitoring in Norway, *G. Rødland*, Volume I, Budapest, Hungary
9. U.S. Experience and Differences Between Civil and Criminal Investigations and Use of Central Elite Force to Supplement Local Inspectors, *C. Willis and D. Gipe*, Volume I, Budapest, Hungary
10. UK Experience in Establishing an Inspectorate for Integrated Pollution Regulation, *J. Handyside*, Volume I, Budapest, Hungary
11. Compliance Monitoring in Poland: Current Status and Development, *J. Jendroska*, Volume I, Budapest, Hungary
12. The Enforcement of the State Policy of the CSFR on the Field of the Montreal Protocol, *M. Kotaska and V. Reháček*, Volume I, Budapest, Hungary
13. Summary of Theme Discussion: Developing an Effective Compliance Monitoring Capability (e.g. Inspector Capability), *M. ten Hove*, Volume II, Budapest, Hungary
14. The Example of the Chemicals Weapons Convention, *B. ter Haar*, Volume I, Utrecht, The Netherlands

See also, Role of Police:

15. The Role of Local, County, and State Police Officers in New Jersey in Environmental Enforcement, *E. Neafsey*, Volume I, Oaxaca, México
16. The Task of the Police, *R. Hessing*, Volume I, Oaxaca, México
17. Summary of Workshop: Role of Police, Facilitator: J. Peters, Rapporteurs: M. Low, T. Shewmake, Volume II, Oaxaca, México
18. The Public Prosecutor's Office of Hungary and Its Development, *S. Fulop*, Volume I, Budapest, Hungary
19. The Development of the Police's Enforcement Position in the Field of Environment, *M. Horstman*, Volume II, Budapest, Hungary
20. Environmental Law Enforcement and the Police, *N. van Helten*, Volume II, Utrecht, The Netherlands

## COMPLIANCE MONITORING

Facilitators: Joop Blenkers, Harley Laing, John Skinner  
Rapporteur: John Jeffery

### 1 INTRODUCTION

A brief overview was presented by the co-facilitators that covered available reference materials such as the recently prepared Compliance Monitoring Protocol manual, Volume I of the Budapest proceedings, the Multi-media Inspection manual, and UNEP's institution building training manual's module on compliance monitoring and inspection, as a starting point for further development of this topic.

### 2 GOALS

An exploration of the activities and requirements necessary to develop and implement a compliance monitoring program. The group was particularly interested in learning about new approaches and ideas that would aid them in either developing a new program or evaluating an existing one. As a group they were looking to increase the efficiency of their programs through multi-media training, approaches, and the number of single media inspections. They also wanted an overview of an actual compliance monitoring program.

### 3 PAPERS

A paper by Mr. Gudmund Nielsen entitled Institutional Strengthening and Capacity Building in the Field of Environmental Inspection and Enforcement in Denmark describes the physical, administrative, and legislative framework of the Danish inspection and control system, providing data on staffing, inspection frequency, penalties and other important compliance monitoring issues. A technical support document, Source Self-Monitoring Requirements: International Comparison, presents comparative information gathered from nine different countries on their use of source self-monitoring, reporting and recordkeeping and is based on key design issues that country officials should consider when developing compliance monitoring programs. Another technical support document, Multi-media Inspection Protocols: International Examples, describes key aspects of how and why multi-media inspections may be included in a compliance monitoring program with information gathered from nine different countries on present multi-media inspection approaches. A UNEP Training Manual on Institution Building was produced to help countries develop their institutional ability to ensure industry compliance with environmental standards by examining different approaches, identifying critical elements of success, and providing options if resources are limited.

## 4 DISCUSSION SUMMARY

### 4.1 Overview of key issues in developing a compliance monitoring program

As requested an overview was provided by the co-facilitators that focused on: (1) the need to define the responsibilities and authorities of each governmental agency involved in the enforcement process and use of compliance monitoring information (i.e., from national government to local police); (2) the need for adequate inspector training; (3) the set of issues dealing with whether to employ multi-media inspections, permitting and the use of multi-media checklists versus single program approaches for air, water, waste etc.; (4) the various self-monitoring methods including emissions testing, record keeping and reporting and the whys and wherefor of each; (5) the use of certified, third-party compliance audits, (6) the issuance of a certification of compliance; (7) the need to maintain and make available background information on sources; (8) the use of an elite inspection group for complicated inspections; (9) the issue of how and when to use citizen complaints, hot lines and other public participation approaches to increase the number of inspectors in the field; (10) the role of an inspector - compliance, enforcement, technical assistance, environmental assessment; (11) how facilities are targeted for inspection- large emitters, risk, citizen complaints, geographical regions, sector-based; (12) safety training and medical monitoring for inspectors; (13) reducing the frequency of inspections as a reward for compliance; (14) mobile source emission inspection requirements; (15) the need for inspection, analytical and information collection quality assurance and quality control (QA/QC); (16) the use of special technologies to monitor compliance such as overflights, Lidar, FTIR, and analysis of other databases; and (17) the need to have and promptly prepare inspection reports.

### 4.2 Defining responsibilities and authorities of each governmental agency

One question brought up was whether or not any new authority was needed to conduct multi-media inspections. Most responded that it was less a matter of authority than of an administrative effort to coordinate inspection activity at a single facility.

### 4.3 To what extent are countries conducting multi-media inspections?

Most participants stated that wherever possible they are already conducting multi-media inspections or are planning to do so in the near future. The reasons were as varied as the countries represented at the session. One country uses this approach to promote a more professional presence at the facility. Others stated the commonly heard compliant from industry that on one day the air inspector would show up, the next day the water, and so on. One mentioned the need to present an image of cost savings by sending all its inspectors in one vehicle to cut travel costs. Others talked about the potential for training and the frequent need to inspect complex sites and that if there were several inspectors there was a greater chance that at least one could withstand the temptation to accept a bribe. Still others were concerned that if only one inspector was sent out the tendency for bribery would increase. All of the participants talked about the difficulty and expense of cross-training and maintaining a multi-media inspection staff.

The topic of integrated or multi-media inspections was brought up again in the context of why it is used on a technical level. Most thought that as a screening tool it was helpful in gaining an overview of a facilities total releases to the environment. It can also be used to develop a historical database for future comparative usage. Many were concerned about the cost to cross-train inspectors and the time to conduct such an effort. Others spoke of resistance on the part of the inspectors

themselves to be cross-trained. One comment was raised as to who was a better inspector, "a generalist or a single media specialist?" The group did not have an answer, but the use of a checklist was viewed as a compromise that can work.

#### 4.4 Source self-monitoring

Another question raised centered around the issue of self-monitoring and what each country is doing in this area. Hong Kong stated that it had no legal basis to process or use self collected information against a facility for direct enforcement response, however third-party audits are conducted to verify self-monitoring data and companies can be made to pay for control equipment if the need for such is identified. One problem is that so much information is currently collected that it has overloaded the system's ability to handle the volume. Sierra Leone and Honduras did not currently use self-monitoring. The Slovak Republic, Latvia, and Poland all depend on self-monitoring information as do Kenya and the Netherlands to assist them in setting priorities for inspections, but all were very concerned about the quality of the information collected. A common approach was to verify this information through the use of inspections. This practice is also used in The United States where the major self-monitoring program in place is the one associated with wastewater discharges. Other programs underway include those for the RCRA, the pesticide manufacturing industry, and air emission sources. Most if not all of the self-monitoring information collected in the United States can be used against a facility in a court of law. Mention was made of the "citizen suit provision" wherein, a citizen, a group or and NGO can file suit against a company for noncompliance based on information submitted by the company under the self-monitoring requirements. The companies must certify under the penalty of law that materials contained in their submittal is accurate and complete.

#### 4.5 Citizen complaints

The next issue raised concerned the policies, use, and practices of citizen complaints. Kenya has a system in place, but industries always point the finger at other companies or say "why don't you go inspect them?" Hong Kong uses its complaint system to target offenders but needs a clear pattern of violation or an extreme case to prove noncompliance. This is based on the reasoning the court places on facilities that can show compliance histories of 90-95%. Malaysia also has a similar approach to complaints and targeting. There is much mistrust of the information submitted via self-monitoring and from complaints and therefore inspectors must use great discretion to determine the next course of action. The Antilles uses a call in number and the offices of all governmental agencies to collect citizen complaints. As Honduras does not have an inspection staff, most if not all violations come to the attention of the government via citizen complaints. The U.S. has a network of local, county, state, and federal hot-lines and other communication links through which individuals can report potential violations. There is also a network of NGOs that citizens can call or contact.

#### 4.6 Data collection and management

On the issue of data collection, many talked about the volume of information but the lack of actual data being available for agencies to base decisions on. Countries like Latvia, the Slovak Republic, and Poland gather information from three or more sources. National information collected and verified via inspections, economic and production information gathered by a separate governmental agency, and the fees levied by the tax offices on projected discharge levels. While they are cross-checked as much as is possible, most have found that there was little connection between these systems. Most countries can not use this information to penalize, fine, or sue

companies who report excess emissions. A few talked about the limitations in their regulations that only allow them to obtain one sample from a source that must then be used to represent the conditions of the entire production schedule. All talked about the need to increase their Quality Assurance/Quality Control/ efforts but were at a loss as to how this could be accomplished within the framework of limited resources.

#### 4.7 Targeting inspections

The next issue discussed was on how targeting of sources was conducted in each of the countries. While most countries had a systematic approach to inspect the largest or most risk assessed facilities, many rely heavily on citizen complaints. Most spoke of limited resources - the necessary number and adequacy of trained inspectors, inspection, sampling, and analytical equipment, and other financial support. Many of the developing countries spoke about the need to develop a legal and regulatory framework before any serious attempt could be made in targeting facilities. Some talked about the concern of industrial lobbying and the potential for bribery, others about the internal competition for resources that made consensus targeting difficult to reach. Many are simply "planning by doing".

## 5 CONCLUSIONS

The group identified five (5) common points of interest/need that should be addressed by those concerned about promoting the issues of compliance monitoring and multi-media inspections. They are as follows:

1. The need for multi-media inspector training in developing countries.
2. The development of a network/database to exchange information on multinational companies.
3. The use of multi-media inspections to deter bribery.
4. The need for ISO 14000 training and a finding on its effect on a countries laws and regulations.
5. The lack of an existing Quality Assurance/Quality Control (QA/QC) system to verify self-monitoring information and the need to establish a reliable and enforceable reporting mechanism.

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## **INSTITUTIONAL STRENGTHENING AND CAPACITY BUILDING IN THE FIELD OF ENVIRONMENTAL INSPECTION AND ENFORCEMENT IN DENMARK**

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### **SUMMARY**

The enforcement framework and the development and organizing of the Danish inspection and control system is described from its beginning and up to the present situation where new challenges have appeared. Some statistical data on staffing, inspection frequency, penalties, etc. are provided. The changes of the environmental inspector's role, the call for further qualification of the inspection system and the general adoption of local environmental action plans for counties and municipalities illustrate the latest developments in institutional strengthening and capacity building in Denmark.

## **1 ENVIRONMENTAL ADMINISTRATION IN DENMARK**

### **1.1 The physical and administrative framework**

The Kingdom of Denmark is part of the Scandinavian area. It's land mass is 43,000 km<sup>2</sup> and consists of a peninsular, with border to the north of Germany, and approximately 500 islands. The total coastline is approximately 7,000 km. A population of 5.2 million gives an average population density of 120 inhabitants per km<sup>2</sup>, but the number of inhabitants in the capital Copenhagen is approximately 1.5 million.

Denmark is administratively divided into 14 counties and 275 municipalities. The two decentralized administrative levels are politically managed by county councils and municipal councils respectively, who are elected by public elections every 4th year.

### **1.2 The legislative framework**

The Danish Environmental Protection Act gives the State, the counties and the municipalities each their own responsibilities in relation to environmental protection. Nearly all inspection and enforcement tasks are delegated to the councils and the municipalities, the counties inspecting the most polluting enterprises. The decentralized authorities are also the permitting authorities, who grant permits and licences to potentially polluting enterprises. The State has practically no inspection role in the environmental field but prepares guidelines and generally supervises inspection carried out by the decentralized authorities.

The first Environmental Protection Act was adopted in Denmark in 1973, replacing the former health regulations and decisions concerning water pollution. The first Act was primarily aimed at industry. Since then the Act has been amended from time to time, and now comprises, besides industry and farming, all other potentially polluting activities and all kinds of pollution. This makes the Act an integrated pollution control legislation. The Act is a framework law which empowers the Minister to lay down specified rules and standards in statutory orders.

From the beginning the Act laid down that responsibility for the practical inspection and enforcement should be given to the decentralized public elected authorities. This principle of decentralization has since then been maintained during revisions of the Act.

Under the first Act it was implied that an effective administrative apparatus was built up, consisting of several hundreds of full-time employees: This comprised an Environmental Protection Agency as the national administrative element, and technical administrative divisions in the counties and municipalities as the implementary element. Without this apparatus, the rules would just be an ineffective gesture<sup>2</sup>

## **2 INSPECTION AND ENFORCEMENT**

### **2.1 Why inspection and enforcement**

The overall purpose of the Danish inspection and enforcement system is according to the legislation to achieve or maintain a satisfactory environmental quality in the surroundings. Through active and fieldwork inspection activities the environmental authority shall get an overview of the pollution and potential polluting activities inside the border of the municipality or county.

The decentralized authorities inspect and where necessary ensure that the Environmental Protection Act and decisions in statutory orders laid down under the Act are complied with. This includes check of compliance with conditions in permits and licences and with orders given by the authority itself. Besides it shall be checked if existing permits are up to date and that all activities which do not need permits or licences do not result in unacceptable pollution. Inspection also has an advising role in connection with information about the consequences of the environmental decisions for the single industry or activity.

Even if the decentralized authorities' obligations to supervise are specified in the Act, the authorities have freedom of choice in terms of inspection methods. The Act does not give instructions on how the inspection shall be organized and carried out. The Danish Environmental Protection Agency (DEPA), however, publishes and disseminates advisory instructions and examples of suitable inspection work.

Danish Environmental Protection Agency (DEPA) also keeps up with the inspection work done by the municipalities and counties through obligatory inspection reports, which the decentralized authorities forward to the Agency once a year. They summarize the reports into statistic overviews of staffing, inspection frequencies, enforcement reactions etc., and the overviews together with theirs overall evaluation of the inspection work done are published in an annual report to the public.<sup>3</sup>

### **2.2 The principle of decentralization**

The delegation of the responsibility for the physical implementation of the Act to the decentralized authorities has a historical background as a continuation of Danish practice in similar areas. Other arguments in favour of this principle include the following:

- Above all, it can be expected that decentralized responsibility for environmental protection will encourage local engagement in environmental matters.
- Inside the frames of the Act there can be a number of different and suitable local solutions to the same problem.
- There is a general wish of giving local elected politicians influence in fields where the Act gives the municipal or county council the possibility of acting in the best of the council's judgement.

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 Inspection visits and enforcement reactions in Denmark 1993

	All municipalities (App. 190,000 enterprises or installations to inspect)	All counties (App. 4,000 enterprises or installations to inspect)	Total
Inspection visits	40,596	5,032	45,628
Requests	9,211	1,008	10,219
Orders	2,413	655	3,068
Prohibitions	153	14	167
Police reports	154	91	245

- By exercising judgements, the local politicians get the opportunity to weigh the local and relevant interests involved.
- Last but not least, it is of crucial importance for the translation of the Act's words into practice that technical administration of sufficient size is available, and who is familiar with the local industrial structure and other environmental conditions.

### 3 HISTORICAL BACKGROUND

#### 3.1 The environmental events

In the middle of the 1980's some acute pollution problems brought environmental inspection and enforcement of especially the municipalities into focus. In the coastal areas of the sea around Denmark oxygen depletion in the bottom layer caused the death of fish and vertebral fauna.

These events could be traced back in particular to outlets of nitrogen, phosphorus and organic substances in wastewater from the cities and leaching from farming. The nutrients gave rise to extreme growth of plankton algae in the sea, and when the algae died they sank to the bottom using the available oxygen in the putrefication processes.

#### 3.2 Agreement on adequate staffing

These events made it evident that after the Environmental Protection Act has been into force for more than 10 years the Act's precondition of an active and fieldworking inspection left much to be desired, especially as regards inspection and enforcement done by the municipalities. A survey in 1984 showed that all the municipalities together employed an environmental inspection staff of approximately 190 man-year, corresponding to 0.37 man-year per 10,000 inhabitants.

The Ministry of Environment and the Danish Association of Municipalities agreed that to achieve an adequate inspection activity an average of one inspector for every 10,000 inhabitants was needed, corresponding to approximately 510 man-year for all the municipalities in Denmark. This figure implied an increase of 320 inspectors to reach the goal of 510 full-time inspectors. The goal was to be achieved during the 3 year period 1985-87.

### 3.3 Strengthening of inspection

Because of the oxygen depletion problems in the sea around Denmark, the Danish Parliament in 1985 adopted a plan for reducing nutrient leaching and organic substances to the sea. In connection with this it was decided that the environmental inspection by the decentralized authorities should be intensified.

By an amendment of the Environmental Protection Act the principle was adopted that the same authority which grants a permit to a plant or installation should also inspect the facility and enforce the conditions in the permit.

It was also laid down that the municipalities and counties every year before April 1 should submit to the Danish Environmental Protection Agency (DEPA) a report of the previous year's inspection efforts and of the employed man-years for inspection purposes.

All these initiatives together caused a boom in the employment of environmental inspectors. Danish Environmental Protection Agency's (DEPA's) first national survey of environmental inspection covered the year 1987. It was found that already then the municipalities altogether employed 459 full-time inspectors, and the counties employed a total of 321 full time inspectors.

Since then the number of environmental inspectors has been around 450 inspectors in the 275 municipalities and 320 inspectors in the 14 counties. For the municipalities, this gives an average of approximately 0.9 man-year per 10,000 inhabitants, but this figure covers considerable variations between individual municipalities. For all other environmental administration tasks, e.g. environmental planning, working out permits, advising of industry etc., the municipalities altogether employ approximately 450 man-years.

## 4 THE FUTURE INSPECTION

### 4.1 New challenges

The stagnation in the number of environmental inspectors and at the same time growing comprehensiveness in the inspection tasks have in recent years brought about growing interest in making the inspection system more effective and further qualify the inspection workforce. While in the first years after 1985 it was a matter of establishing an inspection workforce of sufficient size to ensure that the environmental legislation could be respected, i.e. to ensure that the minimum demands are complied with. The environmental administrations in many municipalities and counties are now well under way adapting to new conditions for environmental inspection.

These new challenges are the result of an amendment of the Environmental Protection Act, which came into force on January 1, 1992. Hereafter the environmental authorities shall by the administration of the Act involve such aspects as cleaner technology, cradle-to-grave principles and life cycle evaluations. In practice these circumstances have implied a change in inspection attitudes in relation to industry away from the police like attitude towards a much more dialogue oriented and co-operational approach.

### 4.2 Paradigm change

The development may be said to imply a paradigm change for environmental inspection. The former authoritative and controlling function is to a certain extent replaced by a role as catalyst, where the inspection encourages, stimulates and maybe even co-operates with the industry to change it to more environmentally friendly and natural resource saving production methods.

The number of man-years in municipal environmental administrations 1990-1993

	Year 1990	Year 1991	Year 1992	Year 1993
Inspection	450	460	440	440
Permitting	130	130	110	110
Mapping and planning	190	220	220	260
Advising	80	100	90	90
Total	850	910	860	900

As examples some municipalities and counties make voluntary co-operation agreements with selected enterprises about introduction of environmental management systems, prioritization of efforts and setting up of environmental targets and action plans for the enterprises. Other municipalities and counties employ a specialist in this field, who for a limited period is at an enterprise's disposal, provided that the enterprise similarly employ a corresponding person in the period it takes to work out environmental status, prioritize fields of effort and set up an environmental action plan for the enterprise. Some municipalities and counties co-operate with the industry about in-service training of the workers about environmental questions related to the single enterprise. The purpose is to involve the workers in environmental action plans, environmental improvements and savings of resources in the enterprises. And further some municipalities and counties have set up what is called Green Councils or Environmental Fora with the purpose of strengthening the dialogue between the environmental authority and the enterprises.

But the definitive breakthrough of the changed role of inspection is still ahead. The Danish Environmental Protection Agency (DEPA) has thus followed a long series of cleaner technology projects in the industry. An evaluation of the projects showed that the involvement of the decentralized authorities in such projects hitherto has been very limited.

#### 4.3 The reserved decentralized authorities

The reserved decentralized municipalities are those municipalities which are not yet "playing." The Danish environmental legislation definitely expects that all municipalities do their job properly, but the legislation does not set precise requirements to how the new aspects as cleaner technology, cradle-to-grave principles and life cycle assessments should be physically implemented in the day-to-day inspection and enforcement work carried out by the single decentralized authority. The other mentioned aspects rely very much on dialogue, cooperation and confidence between the municipality and the single enterprise. The reasons for not "playing" are mentioned in 4.3 in the article. On a very rough estimate more than 75% of the municipalities are still not "playing," especially those municipalities which have a very small environmental administration.

There are probably several reasons for this reservation, especially found in the municipalities. Many municipalities have a very small environmental administration with only one or two environmental inspectors. Under these circumstances it can be very difficult to find time for other aspects than the traditional inspection and control function. Maybe also uncertainty of how to tackle the task in practice and especially the authoritative role in this connection can be a reason for

the reservation in the municipalities. Further lack of basic knowledge about cleaner technology, environmental management, life cycle assessments etc. at the environmental inspector level may contribute to the reservation. Finally, probably many environmental inspectors do not have a professional network in his or her geographical region, which can function as or can create a common basic reference for handling the new assignments.

#### 4.4 Qualification for the catalyst role

To make the decentralized environmental authorities function as catalysts for the development in accordance with the intentions of the Act and to further stimulate the process, the environmental inspection in all decentralized authorities must be suitably qualified for this task.

Environmental inspectors naturally need not be experts in all industrial sectors and productions, but they need basic knowledge about environmental management systems, cleaner technologies etc., and ought to have suitable professional qualifications to be able to go into a dialogue about these questions in connection with inspection visits at the enterprises.

The qualification dilemma can probably be solved by means of goal-directed in-service training of the inspectors, both as regards the technical and administrative aspects and as regards the more dialogue oriented tools which are needed in connection with negotiations with the enterprises and co-operation with several participants about suitable solutions.

Parallel to this, inspector networks should be established about these topics, which can serve as a professional environment and create the necessary basic reference. Part of this could be done by means of a common data base where information about experts and relevant experience gained by other inspectors can be found and to which own experience with the single industrial branch can be reported.

This upgrading of the inspection system and the follow up of the scheme will be an important task for the Danish Environmental Protection Agency (DEPA) in the continuous effort to qualify the system to match the demands of the environmental legislation.

## 5 LOCAL ENVIRONMENTAL ACTION PLANS

### 5.1 A united plan for the local environmental initiatives

Still more municipalities and counties in Denmark collect all planned environmental initiatives into a local environmental action plan, which is adopted by the municipal council or county council. Instead of the former separate planning for each environmental sector, e.g. drinking water, wastewater, noise and air pollution, inspection of enterprises and animal farms, waste disposal and recycling, oil and chemical waste, polluted sites, nature conservation etc., all these activities are united in the local environmental action plan.

It is voluntary for the single municipality or county to work out such a plan, but the advantages involved become still more obvious. The DEPA has worked out a guideline for making local environmental action plans, because such plans among others strengthen the environmental inspection system<sup>4</sup>.

### 5.2 The basic idea of the environmental action plan

A local environmental action plan typically consists of a status part, an environmental strategy and prioritisation part and an action part. Further an annual revision part can be included.

Among the advantages of the local environmental action plan should be mentioned:

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- The plan gives a general view of the conditions of the environment within the county or municipality;
  - The plan gives a general view of the environmental tasks of the authority;
  - The plan is very well suited as a political prioritization tool for optimal use of existing administrative and financial resources in the environmental field;
  - When the local politicians have prioritized the plan and decided to carry it out, the technical administration has a precise guide for organization of environmental work.
  - For the citizens of the county or municipality the environmental action plan is a clear source of environmental conditions.
  - For the local politicians, the administrative managing director and the environmental staff the plan is besides being an excellent working tool an obvious way of visualizing the environmental tasks and efforts to the public.

The key point here is the commitment of the local politicians when the local environmental action plan has been approved by the municipal council. From the beginning the starting point for working out local environmental action plans was the inspection and enforcing activity in the municipality, and this item is still the core in most plans. The status part of the plan gives an overview of the number and types of polluting enterprises and other activities within the borders of the municipality. In the preparation of the plan the technical administration in the municipality lists all kinds of environmental requirements which are either demanded by law or otherwise desirable. This can e.g., be the number of enterprises, and — not least — the inspection staff needed for carrying out the single environmental activity. Concerning inspection and enforcement activities this means the number of environmental inspectors to check compliance with the environmental requirements.

When the local politicians prioritize the proposal for the plan and the plan has subsequently been approved by the municipal council, the council has both finally decided the municipal environmental activities for the coming year and at the same time set aside the necessary money in the municipal budget.

The experiences gained so far with the local environmental action plans are very promising. Nearly all decentralized authorities who have made such a plan can report that the plan has proved a success. Especially concerning the inspection aspects, the local administrations feel that the environmental action plan contributes to strengthening the inspection and enforcement administration. Further, the local environmental action plan can entirely, or partly, form the local Agenda 21 initiative in the municipality or county.

### 5.3 The inspectors and their new role

In general, environmental inspectors in Denmark are very enthusiastic in their work. If given sufficient opportunities — i.e., time, knowledge and training — they will undoubtedly throw themselves into the work with implementing the new “soft issues” of promoting pollution prevention and cleaner technology as mentioned above. The implementing phase will be a balance between the traditional inspector role and the role as guide. Naturally the inspector should never forget that his primary role is to check compliance and — if necessary — to enforce the environmental demands. Nor should the enterprises ever forget the inspectors’ basic authoritative role. But when the enterprise has shown its ability and will to go further along the environmentally friendly line, the relationship between the inspector and the new enterprise is ready for the dialogue about the mentioned new

issues. And the experience hitherto — as mentioned in 4.2 — has proved very successful. Still more companies and enterprises are interested in a positive dialogue with the local environmental authorities about these “green issues.”

## 6 CONCLUSIONS

Institutional strengthening and capacity building in Denmark play on several strings. The number of environmental inspectors in counties and municipalities has stagnated and cannot be expected to increase in the near future. The new Danish Environmental Protection Act implies changed and more complicated inspection strategies because of the demand for inspection systems to promote cleaner technology solutions in the enterprises. The new challenges and the inspectors' new role as catalysts for this development calls for a change in inspection attitude and for further qualification of the inspection staff.

Local environmental action plans have — although voluntary -- positively shown its value as institutional strengthening instruments. It can be expected that such plans will create permanent frameworks for environmental initiatives in the Danish counties and municipalities.

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## SYNOPSIS OF INTERNATIONAL COMPARISON OF SOURCE SELF-MONITORING, REPORTING, AND RECORDKEEPING REQUIREMENTS

Capacity Building Support Document for Environmental Compliance and Enforcement Programs

### Purpose

Consistent with the goals of the Fourth International Conference on Environmental Compliance and Enforcement, its international sponsors, and the Executive Planning Committee, this document addresses source self-monitoring, reporting, and recordkeeping as a cornerstone to compliance monitoring. Source self-monitoring, reporting, and recordkeeping constitute those activities that are required to be undertaken by regulated entities to monitor and report on their environmental compliance. This document presents comparative information on how different countries use source self monitoring requirements as a form of compliance monitoring within their environmental enforcement programs.

### Scope

Information and data on self-monitoring, reporting, and recordkeeping requirements was solicited from various countries throughout the world. Information provided by the following countries is contained in the document:

Canada	Germany	Hungary
India	Mexico	The Netherlands
Norway	United Kingdom	United States

In addition, limited information on self-monitoring requirements in Israel and Japan programs that was obtained from available reference sources is included.

### Subject Areas

The document is organized based on the key design issues that country officials should consider when developing or enhancing its self-monitoring, reporting, and recordkeeping requirements as part of their compliance monitoring program. Specific Chapters cover the following design issues:

- *What is source self-monitoring?* What program objectives can be used to achieve?/ How are data used? Through what legal mechanisms is self-monitoring imposed? At what level of government are self-monitoring requirements imposed?
- *Who must conduct self-monitoring?* What industries should be subject to source self-monitoring requirements? Should this include all of an industry or some subset?
- *What source self-monitoring activities are required?* What parameters must be monitored, at what frequency, using which method?
- *What information must be reported and what records must be maintained?* What information must be reported to the regulatory agency, in what format, at what frequency, and to whom? What information must be maintained and for how long?
- *What quality assurance and data validation procedures are implemented and how are data managed?* What procedures are conducted to ensure the accuracy of the self-monitoring data (by both the regulated community and the regulatory agency)? How are data managed by the regulatory agency?
- How is self-monitoring enforced?

Within each Chapter, the factors and/or criteria typically used by countries in answering these design questions are discussed. Country-specific examples are provided that illustrate how these factors have been utilized in the development of various countries' programs. Detailed country-specific information (for example, copies of reporting forms) are included in the Appendices as reference materials.

## **SYNOPSIS OF MULTI-MEDIA INSPECTION PROTOCOLS: INTERNATIONAL EXAMPLES**

Capacity Building Support Document For Environmental Compliance and Enforcement Programs

### **PURPOSE**

Consistent with the goals of the Fourth International Conference on Environmental Compliance and Enforcement, its international sponsors, and the Executive Planning Committee, this document addresses key aspects of how and why multi-media inspections may be incorporated as a component of a compliance monitoring program. In a multi-media integrated inspection, the regulatory authority evaluates a facility's overall compliance with environmental control programs rather than assessing facility compliance on a media-specific basis. In addition, multi-media inspections may address environmental performance issues, such as the evaluation of pollution prevention opportunities, that offer environmental benefits in excess of that required by statute or regulation.

### **SCOPE**

Information and data on multi-media inspection approaches was solicited from various countries throughout the world. Information provided by the following countries is contained in the document:

Sweden	Germany	Hungary
India	Mexico	The Netherlands
Norway	United Kingdom	United States

Examples of multi-media inspection approaches used in the United Kingdom and United States are included in the document. In addition, examples of specific questions asked during inspection programs are included in the Appendices.

### **SUBJECT AREAS**

This document presents key factors that program managers could consider prior to adopting multi-media inspections into an overall compliance monitoring program. As shown in this document, there are a variety of approaches for conducting multi-media inspections. Selection of an appropriate approach depends on the regulatory program's purpose for conducting a multi-media inspection, the size and complexity of targeted facilities, the expertise and training of the inspectors, the time allotted for conducting the inspection, and other factors. Country officials can use the information provided in this document as a reference for designing a multi-media inspection program appropriate within an overall compliance monitoring framework.

## **SYNOPSIS OF COURSE: CONDUCTING MULTI-MEDIA INSPECTIONS**

### **AN INTERNATIONAL TRAINING COURSE**

This course is one of series designed to build capacity for implementing environmental management programs in a variety of governments and cultures. The purpose of the series of training courses in their format and content is to stimulate participants to think creatively about how to translate national goals, laws, and requirements into action that effectively changes behavior in society so as to achieve the desired environmental results. In particular, the inspector training course provides an overview for new inspector personnel of the basics of environmental compliance inspections but also provides a basic understanding of several industrial processes from the vantage point of control and pollution prevention.

#### **What is the Training?**

The Conducting Multi-Media Inspection training is an intensive, five-day course for governmental officials responsible for assuring that facilities subject to environmental requirements, specified in laws, regulations and/or permits, are in compliance with those requirements. The course provides information and training on the role of multi-media inspections for enforcement and compliance assurance, and trains participants on how to safely conduct inspections for compliance with air, water and hazardous waste laws.

#### **Why Was This Training Developed?**

Conducting Multi-Media Inspections training was created in response to a need recognized in the Mexico-U.S. Border Plan for training and education of environmental inspectors. The course was developed by USEPA during 1991 and 1992, in coordination with Mexico's Secretaria de Desarrolla Social (SEDESOL). The training, however, has been subsequently adapted to meet the needs of other countries and cultures. The use of inspections is an effective tool for environmental enforcement and compliance assurance, which is gaining more and more attention as the public, governments, and industry take action to prevent and reduce the health and environmental consequences of pollution.

#### **What Does the Course Do?**

This course provides training and knowledge to conduct multi-media inspections. It includes a discussion of the role of inspections in the national environmental program, health and safety issues, compliance inspection planning, plant survey and inspection techniques, industrial processes, air, water and hazardous waste emission points, pollution control devices, and pollution prevention activities. Course materials include information on several industrial processes including: processing or manufacturing of petrochemicals, chemicals, pharmaceuticals, metals, leather goods (tanneries), furniture finishing, wood preservation, cement, injection molding, printed circuit boards, or electroplating.

#### **Who Will Benefit from the Course?**

The course is designed especially for government officials charged with conducting inspections to ensure environmental compliance at industrial facilities. Course participants may include officials of national agencies responsible for health, safety and environmental law enforcement.

**How is the Course Delivered?**

The course is delivered by instructors who guide attendees through the materials. The course may be delivered by USEPA instructors, or by in-country instructors who have training and experience in the substance of the course.

**What Do Participants Learn?**

**Day 1**

Review of the national environmental program of the country where the course is being delivered and the role of inspections in enforcement and compliance assurance.

**Day 2**

During the morning, participants learn health and safety precautions to be taken during field activities. Topics include preparation for field activity, hazard evaluation, and the use of protective clothing and respiratory devices. The afternoon session provides an overview of the multi-media inspection process, including planning, opening conference, information gathering and post-inspection activities.

**Day 3**

The morning session provides a brief introduction to pollution prevention, and then focuses on specific inspection issues for air, water, and hazardous waste. The afternoon session discusses specific issues of inspecting industrial processes chosen by the host country. For example, the industrial processes may include processing or manufacturing of petrochemicals, chemicals, pharmaceuticals, metals, leather goods (tanneries), furniture finishing, wood preservation, cement, injection molding, printed circuit boards, or electroplating.

**Day 4**

Continuation of inspection issues for industrial processes chosen by the host country.

**Day 5**

Field Trip to industrial processing plant and course wrap-up.

## SPECIAL TOPIC WORKSHOP E

### Promoting Voluntary Compliance: Environmental Auditing, Outreach, and Incentive Programs

Papers and Workshop E discussions address the following issues:

- Potential effectiveness of the International Standards Organization's international environmental management standards (ISO 14000 series) in promoting compliance.
- Potential for official government recognition in efforts to promote compliance and take enforcement response.
- The role of compliance promotion in an enforcement program and how success might be defined for a program to promote compliance: What might be its goals.
- Successes of programs designed to promote compliance in achieving compliance independently and in relation to inspection and enforcement response.
- The proper relationship between technical assistance, inspections, and enforcement response.
- How enforcement response policies might be designed to promote compliance as well as deter violations.

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1.	Summary of Promoting Voluntary Compliance Workshop, <i>Facilitators: M. Olman, L. Rimer, Rapporteur: D. Novak</i> .....	399
2.	Legal Marketing of Environmental Law: The Philippines Experience, <i>A. Oposa</i> .....	405
3.	The Mexican Environmental Audit as a Voluntary Norm, <i>J. Calderon</i> .....	419
4.	Dutch Industrial Target Group Approach: An Enforcement Study on the Voluntary Environmental Agreement with Petrol Stations, <i>H.P. Staats</i> .....	427
5.	Stimulating Voluntary Compliance: New Policy Directions in the United States: The Minnesota Experience, <i>L. Paddock</i> .....	439
6.	Encouraging Voluntary Compliance Without Compromising Enforcement, <i>E.S. Schaeffer</i> .....	451
7.	Dutch Industrial Target Group Approach: A National Enforcement Study on the Voluntary Environmental Agreement for the Wood Preservation Industry, <i>W. Huurdeman</i> .....	461

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| 8. See also Implications of ISO 14001 For Regulatory Compliance, <i>J. Cascio</i> ,<br>Theme 1 .....                              | 43  |
| 9. See also Information Sharing as an environmental Policy Tool: The Indonesian<br>Experience, <i>N. Makarim, J. Butler</i> ..... | 881 |
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See related papers from other International Workshop and Conference Proceedings:

1. Promoting Voluntary Compliance: Environmental Auditing, Outreach, and Incentive Programs, *J. Hall*, Volume I, Oaxaca, México
2. Promoting Voluntary Compliance: Environmental Auditing, Outreach, and Incentive Programme, *H.M. Kajura*, Volume I, Oaxaca, México
3. The Compliance Incentive Experience in Santa Rosa, California, *J.W. Gam, M.L. Grimsrud, D.C. Paige*, Volume I, Oaxaca, México
4. Promoting Voluntary Compliance: A Valuable Supplement to Environmental Enforcement, *M.M. Stahl*, Volume I, Oaxaca, México
5. Summary of Workshop: Promoting Voluntary Compliance, *Facilitator: S. Bromm, Rapporteur: D. Bronkema*, Volume II, Oaxaca, México
6. Promoting Voluntary Compliance: Linking Competitiveness, Corporate Quality, and Self-Auditing, *J. Olha, A. Mastrandonas*, Volume II, Oaxaca, México
7. Voluntary Environmental Initiatives and Environmental Policy: Environmental Management Systems, Auditing, and Enforcement, *N. Kennedy, A. Greene*, Volume II, Oaxaca, México
8. From Public Disclosure to Public Accountability: What Impact Will It Have on Compliance, *F. Irwin*, Volume I, Budapest, Hungary
9. Use of Public Disclosure in Environmental Protection Programs to Enhance Compliance and Change Behavior in the United States, *P. Keough*, Volume I, Budapest, Hungary
10. The Role of Industry: Empowerment and Environmental Protection, *J. Plaut*, Volume II, Budapest, Hungary
11. Public Disclosure and Its Impact on Compliance, *N. Blackburn*, Volume II, Budapest, Hungary
12. Target Group Management Industry and Internal Company Environmental Management, *J. Peters*, Volume I, Utrecht, The Netherlands

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## PROMOTING VOLUNTARY COMPLIANCE: ENVIRONMENTAL AUDITING, OUTREACH, INCENTIVE PROGRAMS

Facilitators: Menno Olman, Linda Rimer  
Rapporteur: Dave Novak

### GOALS

The sessions addressed the following questions:

- Can banks and insurance companies create special incentives for companies that promote voluntary compliance?
- How can voluntary compliance reduce compliance costs to the regulated entity and the regulatory agency?
- Does voluntary compliance work better in some sectors than others — i.e. large /small, high/low-tech, sectoral, locational?
- How can EMAS/ISO work with traditional regulation?
- Does an audit program affect the type and number of inspections or the type of permit?
- Can voluntary compliance work for small and medium enterprises or cottage industries?
- What drives voluntary compliance?

### 1 INTRODUCTION

Given the level of interest in programs to promote voluntary compliance, engage in and foster environmental auditing, and to design incentive programs, two workshops were held at the conference. The group discussed whether there is such a thing as voluntary compliance, some of the creative programs governments have developed, and keys to success. In particular, the participants discussed the issue of accountability on the part of both the regulated community and the government for achieving compliance with such programs, and the fact that enforcement is essential to drive voluntary compliance.

There is substantial interest in the potential impact of ISO 14000 and EMAS in promoting compliance, but some uncertainty as to the specific impacts of the program.

### 2 PAPERS

Six new papers add to the growing literature on the subject of promoting voluntary compliance. The papers evidence a greatly increased level of sophistication in governmental and nongovernmental programs designed to promote voluntary compliance and their relationship with traditional enforcement programs. Mr. Calderon wrote about Mexico's experience using a voluntary program of government audits to assess both compliance and pollution prevention opportunities, and to delay consideration of penalties to provide some time for correction. The program preserves and establishes enforcement consequences for failure to come into compliance. He discusses the

resource implications of the program and a review underway to explore options for the future. Mr. Staats and Mr. Hurrdeeman each provide individual papers on two sectors in the Netherlands that have entered into industry-wide covenants with the government to reduce pollution voluntarily, to be incorporated also as permit conditions. The papers explore experience with petrol stations and wood preserving industries respectively. They conclude that in the absence of other actions, compliance with voluntary industry agreements was mixed, sometimes not as timely or complete as it should have been. Factors contributing to voluntary compliance with the terms of these agreements included, incorporation of covenant terms into licenses and permits, the strength of the enforcement program of the locally responsible authority, and participation in the relevant trade association which helped to formulate the agreements with government. Mr. Lee Paddock of the United States reviewed current trends in complementing U.S. enforcement programs with compliance promotion programs including, education, free telephone access to assistance (Hotline), technical assistance programs, experimental programs for defining new relationships with industry leaders, and economic incentive schemes to support the regulatory agenda. Mr. Joseph Cascio prepared a paper on ISO 14000 and its relationship to industrial compliance with environmental requirements. His paper supports the need for continued government role in environmental regulation and enforcement but advocates a special relationship with companies committing to environmental management through ISO certification and registration. Finally, a paper prepared by Mr. Eric Schaeffer describes how US EPA's penalty policies have been amended to encourage voluntary self-detection, prompt self-correction and disclosure of violations. Mr. Nabel Makarim's paper describes Indonesia's public rating scheme which is used to assess compliance and beyond through the use of a five color coded ranking. Documentation of results describe some early successes.

### **3 DISCUSSION SUMMARY**

#### **3.1 Is there such a thing as "voluntary" compliance?**

All the participants agreed that there is no such thing as voluntary compliance without regulation or requirements with which all must comply. In addition, there need to be other drivers of compliance besides regulation for "voluntary" compliance to take place such as:

- The costs of waste management must be sufficiently high to prompt action;
- The risks from bad publicity must be a real factor; and
- The companies must face long-run liability for damages and non-compliance.

The fundamental reason for government activities to promote voluntary compliance is that those firms that audit and take actions to comply free up resources of regulatory agencies to focus on firms that either do not audit or take steps toward compliance.

#### **3.2 What drives voluntary compliance?**

The group identified six factors that drive voluntary compliance:

1. public opinion;
2. global competitiveness;
3. enforcement;
4. self-motivation and awareness;

- 5. improvements in internal accounting systems that identify higher than expected costs of waste management; and
- 6. requirements of suppliers and buyers.

3.3 Where does compliance promotion fit into the continuum of enforcement approaches?

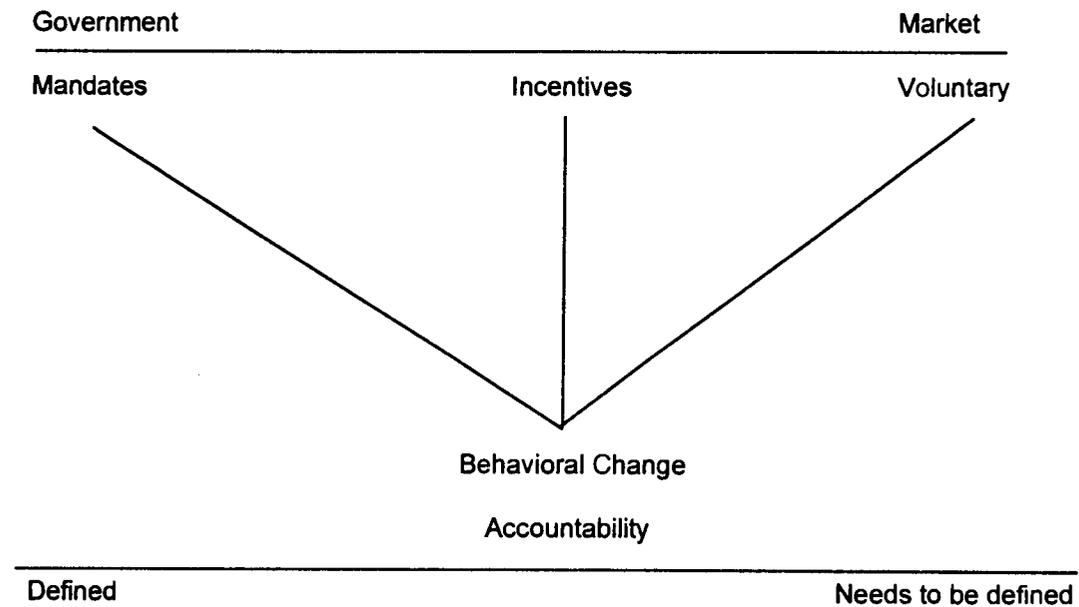
Participants discussed whether voluntary programs can work in the absence of regulatory requirements. There was general consensus that a regulatory program is, indeed, needed to drive voluntary actions. Many participants asserted that voluntary compliance would not occur without high costs of waste management, bad publicity, or long-run liability.

One participant suggested that an international police force, which acts as an enforcing arm in developing countries without enforcement programs could be a driving force for voluntary compliance. Other participants disagreed that an international force could be appropriate within any sovereign nation.

The group agreed that a voluntary program such as EMAS or ISO could free up resources of regulatory agencies to focus on firms that either do not audit or take steps toward compliance.

Participants formulated Figure 1 that describes the continuum of enforcement approaches. It describes the fact that the market place can drive voluntary action to protect the environment but may not adequately send the right signals. Government mandates establish norms, but to change behavior it is important that mandates be backed up with the right kinds of incentives to act in the right way, and that they use, to the extent possible, market forces to achieve behavior change that is mandated.

**Figure 1 Continuum of Enforcement Approaches**



norms, but to change behavior it is important that mandates be backed up with the right kinds of incentives to act in the right way, and that they use, to the extent possible, market forces to achieve behavior change that is mandated.

What became clarified by the discussion is that each approach to getting behavior change requires some accountability. Government establishes accountability with its mandates through compliance monitoring, including self-monitoring, and enforcement responses. The market mechanisms, incentives and other schemes similarly require accountability to the public and officials if they are to blend in with the entire regulatory scheme.

New voluntary standards for environmental management such as ISO 14000, responsible care programs, and EMAS have some provisions for accountability but it is still unclear whether these will clearly relate to how well these industries, companies or facilities will measure and report on their compliance status.

3.4 What is the difference between ISO 14000 and EMAS? What difference might it make to compliance and enforcement program implementation?

ISO and EMAS constitute somewhat different approaches to voluntary programs. ISO 14000 series standards are related to environmental management systems. EMAS is a European Community regulation which mandates voluntary programs in each of the member states for public accounting, auditing, and environmental management systems with specific provisions which contain more substantive provisions than does ISO.

#### 3.4.1 Performance versus systems

Whereas ISO is simply a management process toward the goal of continuous improvement of the management system itself, EMAS is performance oriented, with environmental improvement as the goal. ISO is simply a management process, which is one step removed from environmental results.

#### 3.4.2 Prevention of pollution versus best technology

Whereas EMAS has as an objective improved environmental performance including the application of Economically Viable Application of Best Available Technology (EVABAT), ISO will allow less than this as long as the firm has a commitment to prevention of pollution, which can include pollution control as well as prevention.

#### 3.4.3 Demonstrated compliance versus commitment to compliance

Whereas EMAS requires that firms demonstrate progress toward compliance with applicable regulations, ISO has no similar requirement. ISO does require a policy commitment to compliance, periodic evaluation of compliance, but does not go so far as to require measurement and the setting of compliance objectives and targets as would EMAS. This is one of the open questions concerning ISO implementation in practice versus a minimalist reading of the text of the standard.

#### 3.4.4 Public disclosure versus consideration of public disclosure

Whereas EMAS require that audit results and other information be directed to the public (public register) and a public statement summarizing the environmental management system, environmental releases and significant environmental events including significant noncompliance, ISO has no provisions for public disclosure. It only mandates that it be considered by the business seeking certification.

#### 3.4.5 Relationship to regulation

Both ISO and EMAS encourage compliance and depend upon regulation and regulatory requirements to establish norms. They also provide a means of going beyond requirements of compliance.

#### 3.5 Use of awards and public rating of compliance

Editor's note: Participants in the session on strategic targeting identified several other country programs utilizing a categorization scheme that is made public as a means of encouraging compliance such as those now in use in Indonesia and the United Kingdom.

## 4 CONCLUSIONS

Participants reviewed the role of programs to promote voluntary compliance in an enforcement program and concluded that while enforcement is essential as a driver of compliance, that voluntary programs can be crafted to play an important if not dominant role in achieving compliance. There should be a linkage between these efforts to make them effective. Voluntary industry agreements, public ranking, forbearance of penalties in exchange for evidence of voluntary commitments to prevention, detection and prompt and complete correction of violations and public disclosure have had their successes, but these successes are influenced by the overall strength of enforcement and regulatory framework. Voluntary compliance programs also have offered a unique opportunity to move beyond compliance to prevention.

Voluntary compliance is considered to be one of the ways to achieve environmental protection. Whereas enforcement may be seen as a repressive measure, voluntary compliance is more of a way of prevention of violations in the first instance. It can be achieved by positive and negative incentives, information, education, communication, certification and covenant. But there will be no voluntary compliance without a strong enforcement program that is and will be executed. Voluntary compliance can mean a shift from regulation to market mechanisms as well and that implies a change in attitude and depends upon the accountability of companies in the marketplace. Classical enforcement measures and new economic, market-oriented measures will have to be used.



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## LEGAL MARKETING OF ENVIRONMENTAL LAW: THE PHILIPPINES EXPERIENCE

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*"Nature, to be commanded, must be obeyed."*

- Francis Bacon  
Novum Organum

*"Marketing sells a product; Law sells a mode of conduct."*

- Anonymous

### SUMMARY

The Philippine environmental law is replete. The level of implementation, however, suffers in the sickbed of non-compliance. This paper seeks to present an evolving hypothesis for an alternative mode for effective law enforcement. For lack of a better term, it is tentatively called "legal marketing."

The paper will seek to examine ways and means by which the social product of the law — the 'ratio legis' — can be more effectively sold and promoted to the target market. It will try to posit a few theoretical principles distilled from the field of experience. Thereafter, it will present a situational analysis of current environmental flashpoints and suggest a practical approach to address them. This technique uses not the 'force of law' as Western legal systems give emphasis; rather, it seeks to use the social and cultural characteristics inherent in Filipinos, and values which they, and perhaps all Asians, hold true and dear.

Since it is only an evolving theory, any comments and suggestions, especially practical examples in communities, will be most appreciated.

### 1 INTRODUCTION

Law is a tool of understanding by which human society conducts itself. The goal and objective of the law is the betterment of the general public, the public interest, or the common good. However, the provisions of the law, per se, are ineffective unless the target market of the law, the consumers so to speak, are aware of the provisions of the law. More important, the consumer of the law must be convinced of the need for such law and must be "sold" to the policy objective of the law, i.e. the reason behind the law, *the ratio legis*.

Under the current legal regime, the method which this marketing exercise relies is solely on "enforcement" rather than on "voluntary compliance and implementation". It depends heavily on the sanctions and methods of the use of "force" to coerce, albeit legally, the modification of behavior. Thus, to discourage a manner of behavior, "criminal" penalties are imposed, for example, fishing by dynamite, the burning of forest land, or the indiscriminate dumping of wastes.

The Philippines has one of the most voluminous set of environmental laws in Asia. The presence of these laws, however, has not prevented the reduction in forest cover from about sixty percent (60%) fifty years ago, to the now critical state of ten percent (10%). Neither has it prevented the destruction of our coral reefs to the now terminal state of only five percent

(5%) in good condition. Illegal fishing methods continue to be practiced and so is slash-and-burn farming. With the heightened economic pace of the Philippines, industrial pollution is and will continue to be a problem in the country.

The Philippine government has enacted approximately 118 environment related laws in the country.<sup>1</sup> Evidently, the legal framework of Philippine environmental law is sufficient in substance and in form, even superfluous. The primary legal basis for environmental protection may be found in the 1987 Constitution. Article II, section 16 provides: "The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature<sup>2</sup>."

Underlying all these laws is the "trust doctrine". The trust doctrine proceeds from the premise that humankind, allegedly the most intelligent being in the animal kingdom, are only the trustees of the earth's natural resources. As a species, we hold these God-given gifts in trust not only for future generations of humankind, but also for the "lesser" forms of animals of which we are supposedly their guardians and stewards. They — future generations of humankind and other life forms — are, in law, the beneficiaries of our trust. If our generation misappropriates for its exclusive use and benefit the natural resources of the earth to the permanent prejudice of future generations and other life forms, we breach that trust.

This misappropriation, if done in bad faith and with knowledge aforethought, is tantamount to "generational swindling", i.e. swindling future generations of what rightfully belongs to them. And because what is damaged is the very life-support system of the rightful beneficiaries, this misappropriation can even result in generational genocide. Finally, the act of misappropriating life-support systems of future generations of life forms (humankind included) violates the highest law of Nature. It offends every living being's right and instinct of self-preservation and self-perpetuation.

## 2 PRINCIPLES OF EFFECTIVE ENVIRONMENTAL LAW IMPLEMENTATION

If one carefully examines the innumerable provisions of formal and informal laws (i.e. statutory and traditional or customary laws), the potential for creativity to make sustainable development work effectively is contained in or in-between the very lines of the Law. Voluntary compliance is more socially desirable than coerced compliance. Put a little differently, the best form of law enforcement is that where the law does not need to be enforced.

In the course of years of environmental law practice, both in the public interest and private sectors, the author has identified several principles of effective environmental law implementation.

First, recall that a law is an agreement of minds, a social contract. As an agreement, the participants must fully understand and appreciate the reason behind — and the need for — the law. In legal language, this is the *Ratio Legis*, the reason for the law. In sociological terms, this is the "social product" and the "common good" which the law seeks to promote. And voluntary compliance is possible only when those whose conduct is sought to be regulated or modified fully understand the reason for the law and appreciate its value. If their understanding is secured that the social product and policy are desirable, then their mental and emotional "agreement" is reached. In addition, the body politic must also participate in the making of the law. When the social policy is generally agreed upon, there is consensus, a characteristic mode of reaching an agreement in Asian societies. Then, the law is nothing more than the informal agreement formally crystallized into words.

Second, legal marketing, or selling the law, may be used to promote voluntary compliance. The legitimacy and effectiveness of a law is in large part dependent on publicizing the law. As ordinary marketing sells a product; law sells a mode of conduct. Thus, in like manner that active marketing, advertising and promotions are techniques used to sell a consumer product, so must creative marketing use proactive methods to "sell" the social good and the mode of conduct desired.

Third, the manner of implementing the law must be socio-culturally sensitive. It must take into account the social and cultural characteristics of the people who are the target market of the law. This is particularly true in situations and countries and regions that may have some commonalities in their socio-cultural traits such as Asia.

Fourth, the law must contain an aspect of punishment in order to modify behavior and serve as a deterrent. That is, people must be aware that deviating from the conduct which promotes social good carries a penalty. Penal law must, however, be reserved only for the hard-headed. And it is effective as a deterrent if, and only if, its application is swift, painful and public.

Human conduct is such that it responds to the stimuli of pleasure and pain. To promote behavior, therefore, it must promise a pleasure, and to discourage it, it must present the possibility of extreme pain.

Technically, the term used is "incentives-and-disincentives." It is also called the "carrot-and-stick" market-based incentives (MBIs). For this discussion, however, a more graphic term shall be used: "candies-and-needles". Candies are so irresistible that unless one has severe dietary restrictions, it is generally accepted, taken and ingested. On the other hand, the prospect of a sharp and long needle being pierced into one's flesh is so squirmingly painful by its mere appearance that one would generally not want to tangle with it.

The following will illustrate some approaches and examples by which the candies-and-needles technique may be applied to address environmental law non-compliance.

### 3 CANDIES AND NEEDLES APPLIED

In the application of this approach, care must be taken to consider the socio-cultural characteristics of the target market. Among Filipinos, as among many Asians, the following cultural attributes are significant:

Highly personal. Filipinos are a highly personal people. They would rather "talk things over" than issue or receive written orders. When people have problems with one another, they are more inclined to approach the person concerned.

Debt-of-gratitude. One value the people hold dear is the debt-of-gratitude. When a favor is owed, it is the source of great shame when one will refuse to requite it.

Face value sanction. "Loss of face" is a sanction of the highest order, higher than ordinary legal sanction. A man can pay a big fine quietly and be done with it. But even a small fine if well-publicized will inflict much greater pain. And the pain extends not only to one's self but also to his family. Thus, the sanction is imposed also on the strongest social tie and ultimate psychological crutch of the wrongdoer. It is so painful, one would not even want to think of it.

### 3.1 Commercial illegal logging

One of the problems that has hounded the Philippine Government is the issue of illegal commercial logging. The laws on the matter have existed since the inception of government in the Philippines. The consolidated Forestry Code<sup>3</sup> lays out the cutting methods, silva-cultural and protection techniques, prohibition of slash-and-burn farming and provides heavy penalties of up to 20 years imprisonment for the violation thereof.

Fifty years ago, the Philippines, an archipelagic country of 7,100 islands with a land mass of 30 million hectares, was estimated to have a virgin forest cover of 16 million hectares, or more than 50% of the land area. The topography of the Philippines is such that at least 50 per cent of the land area must be devoted to forest lands. Being of volcanic geology, the islands generally have central highlands and gradually sloping down to sea level. Thus, the law requires that all lands with at least 10 degrees<sup>4</sup> in slope must be devoted to forest land and kept in "vegetative condition sufficient to prevent erosion and adverse effects on the lowlands."<sup>5</sup>

In 1988, a satellite imagery was taken of the country. It was determined that the virgin forest cover had been reduced to a mere 800,000 hectares, a mere 2.6% of the land area. The period from 1970 to 1985 showed that notwithstanding the strict laws on the matter, forest degradation was at its most severe. Among the catalyst culprits is commercial illegal logging.

The same situation is observable in the country's marine resources sector. Presidential Decree 704<sup>6</sup>, otherwise known as the Fisheries Code, provided for the policy legal conduct being promoted in the fisheries sector, and also provided for heavy penalties therefor. This has not prevented the destruction of our coral reefs, for example, from being degraded so badly that only 5% of the country's wondrous coral reefs remain intact.

#### 3.1.1 The candies

In a democratic system of government, participation by the sector concerned in the law-making process is essential. Thus, the requirements of due process, public hearings, and investigations in aid of legislation have been provided as an outreach mechanism of the legislative procedures. When a law is however *fait accompli*, i.e. when the law has been made and all it needs is enforcement, the participatory technique can be applied to the aspect of creative implementation.

The first step is to identify and invite all lumber/wood dealers, loggers, and others involved in the industry to individual meetings.<sup>7</sup> These persons all have a stake in the sustainability of the supply of trees. They are the so-called "stakeholders."<sup>8</sup> This meeting must also be attended by top-level inter-agency officials and citizens groups (NGOs). The agenda is to: a) enlighten; b) excite; and c) en-act.

The critical nature of our present forest resources must be explained with great patience and clarity. Then, appeal is made to them as fellow Filipinos and as fellow human beings. After all, they too have a stake; they too are concerned with the future of their country and of their own children.

The meeting must be attended by other top officials of the Department of Environmental and Natural Resources (DENR), the National Bureau of Investigation (NBI), the Department of Justice, the Bureau of Internal Revenue (BIR), the Multi-Sectoral Forest Protection Committee, Non-Governmental Organizations (NGO), Local Government Unit (Governor or Mayor) (LGU), and the media. It is a subconscious message and an exhibition of political will, not only of government but also, and importantly so, of the citizenry, the People. With the presence of these personages, the message is sent, subtly and most powerfully: These are the people they will have to contend with. The medium is the message.

The stakeholders must be enticed with incentives that answer the question, "what's-in-it-for-them." Human nature is such that self-interest is higher in rank than public interest. The mark of a good negotiator is when one can find the right blend between self and public interest to achieve the desired end.

The Department of Environmental and Natural Resources (DENR) can offer many different incentives. For example, it can offer organized and profitable tree-planting. The lumber/wood businessmen can form a consortium and can be given an Industrial Forest Management Agreement (IFMA) over several thousand hectares of denuded land. Under this tree-farm concept, the planters will be given the privilege of harvesting the planted trees. With the growing awareness on the profitability of tree-planting, many are considering the venture. The hindrance appears to be in the bureaucratic requirements to avail of the program.

Administrative assistance must be extended and must include the facilitation of a long-term soft loan to cover the heavy capitalization needs. Also, the DENR can help register the project with the Board of Investments for other fiscal incentives. The idea behind this is that since the lumber businessmen want to cut and sell wood, let them take care of its supply. There will be no substantive debate on this basic point and everyone will be in general, if not unanimous, agreement. This option is so attractive, it will be difficult to refuse.

The DENR can offer a grace period for "ecological reconciliation." The government has relied heavily on raids and confiscations. But the target market must be allowed to manifest a gesture of their sincerity and commitment to the common goal. Within say, 30 or 60 days, they may be allowed to report and surrender, and thereafter dispose of, their illicitly-sourced inventory at public auction supervised by the DENR. With a public auction, the lumber/wood "surrenderers" are assured the best prices. After the sale, government gets its 25% share in forestry charges, and the businessmen are allowed to begin anew with a clean slate, a *tabula rasa*.

The DENR can offer technical assistance such as in the mapping or surveying of the area allotted for utilization by the lumber businessmen. Also the DENR can advise them as to what trees are most compatible with the soil and topography of the area and even the cultivation and harvesting system appropriate to the locality. Support can also be extended by the government in the difficult initial stages of community-organization and social preparation.

### 3.1.2 The needles

For those who fail or refuse to modify their behavior, there are many suggested sanctions, actual and imaginary. It may be suggested to them (the lumber and wood dealers) that within the grace period allotted and thereafter, monitoring and surveillance will be conducted by a joint task force of the National Bureau of Investigation, DENR, Bureau of Internal Revenue and NGOs. Good faith compliance is better advanced when "one speaks softly yet carries a big needle."

For the willful violators, lightning raids must be conducted after the grace period. These special operations can be carried out by a composite elite team from the above mentioned sectors (as well as Media). It has been proven that legal proceedings such as an immediate inquest can be done with almost-surgical precision. In the unprecedented raid of the Super Mahogany Plywood Corp. in Butuan City, Agusan del Norte on 13 August 1992, a raiding team of the above mentioned department including the Justice Department and the media struck with pinpoint accuracy well armed with a notebook computer, printer, photo-video equipment, and conducted on-site inquest proceedings. Instead of the arrested suspects, high-ranking officials of the company, being brought to the investigating magistrate, it was the latter that arrived on-site and, there and then, conducted legal proceedings. In a matter of five hours from

arrest, the respondents were in jail, legally. Their picture, taken behind bars, was widely published in national newspapers. This demonstration of swift and painful justice has been repeated since in more dramatic air-land-and-sea operations. It can be done.

Multiple criminal charges may be filed for: 1) illegal logging<sup>9</sup>; 2) tax evasion<sup>10</sup>; and 3) anti-fencing<sup>11</sup>; (for selling or otherwise dealing in things that were the products of a theft of government property, i.e. forest products from the national and natural patrimony). Administrative sanctions may include: 1) cancellation of the lumber dealer's license; 2) cancellation of the Mayor's permit to do business; and 3) revocation of the business license or corporate franchise (with the Bureau of Domestic Trade / Department of Trade and/or the Securities and Exchange Commission) on the ground of "violation of law". In addition, there may be civil suits brought by the government, Non-Governmental Organizations (NGOs), or both, seeking multi-million dollar environmental damages for the loss of wildlife habitat, loss of the water and carbon dioxide absorption, erosion, siltation, loss of agricultural productivity, loss of marine productivity, aggravation of the greenhouse effect, global warming, climate change, etc.

The DENR can make arrangements with the government and private media networks to block off a short period of time or newspaper space to publicize illegal logging offenders on a regular basis, say three times a day for three months. As previously discussed, Filipinos dread the loss of face. The constant repetition of one's name and the publication of one's picture is more than enough to cause the utter loss of face. Truly, the prospect of the series of penalties inflicted wholesale or in seriatim, can make one desire to avoid its occurrence.

### 3.1.3 Advantages of the Proposal

There are important social and cultural values that come into play in this exercise, such as: 1) inter-personal relations; 2) face-to-face consensus; and 3) the face value sanction.

The use of non-adversarial and non-confrontational methods in the resolution of societal issues is a reality in Asian culture and must be played up for maximum utility. We are a highly personal people and would rather talk than fight. Conflicts are attempted for mediation, conciliation and informal arbitration by and among members of the extended family system and of friends.

However, because of the super-imposition of the American legal system into the Philippines, the adversarial litigation has become overly relied upon in the more recent history of the country. With the tendency of "students" to surpass their "teachers", the Filipinos are now probably the most litigious people in Asia. But then this is not inherent in our culture.

Moreover, the adversarial litigation model cannot be used with optimum effect for environmental law issues in the Philippines. The judicial system is still relatively weak. Litigation is also time-consuming as well as emotionally and financially aggravating. Thus, even the Americans, the teachers of the litigation model, are beginning to consider alternative dispute resolution (ADR) methods especially in addressing environmental issues.

There is a Filipino saying that some things are better done sitting down than standing up<sup>12</sup>. The very Filipino way of face-to-face negotiation to arrive at a consensus—"*ang pinag-uusapan*"<sup>13</sup> must be used. As a highly personal people Filipinos value face-to-face agreements more than the written "legal" document.

Corollary to this is the "loss of face" (*napapahiya*) that results from the non-observance of what has been agreed upon. The "higher and more painful sanction" is, in Filipino, called "hiya" or shame. Indeed it is so valuable that it is generally considered better for a person to lose everything else except face, honor, or name.

The ultimate objective of this exercise and campaign is to get the target market to move and act on their own volition. When people understand and internalize the purpose and the reason for the necessary course of action, they will act on their own steam. Information, education and consciousness are not enough. The target market must take the necessary action to "buy" the product.

With all the irresistible and attractive benefits of the "packaged product", only the very stubborn will refuse. For them is reserved a special operation in legal surgery.

The agreement thus reached by the stakeholders must be preserved in printed memory, documented in both print and photo-video, as a public gesture of commitment of all the parties to abide by its terms in good faith. This news must be widely disseminated to local and international networks. The public dissemination will serve two functions: 1) it is a public declaration after which there is no turning back (otherwise "face" is lost); and 2) it is a subtle act of contrition not only by the parties but also by the Philippines as a country.

### 3.2 Soil and water conservation

The marketing of environmental law may also find application in land tenure problems. In this case, the product is the social good of soil and water conservation and the afforestation of denuded mountains. The Forestry Code mandates that lands of 18% slope must be kept in sufficient vegetative condition to prevent erosion. Yet the country is losing an estimated 1 billion tons for topsoil every year. The central Philippine island of Cebu, a long and narrow land mass of 500,000 hectares, suffers from the most severe water shortages and saltwater intrusion. It has a zero forest cover notwithstanding the fact that as early as in the 19th century, by Royal Decree of the King of Spain, logging was already totally banned on the island.

#### 3.2.1 The candies

It is a psychological reality that people do not make long-term investments on land for soil and water conservation measures unless they have secure land tenure. If one is insecure about being evicted from the land he is working on, he is not likely to plant long-term trees and spend time and effort to configure the land in a manner that will protect the topsoil from erosion. This psychological reality can be used for ecological advantage.

Assistance can be extended in expediting the surveying and issuance of the appropriate land tenure instrument (e.g. certificate of title, 50-year certificates of stewardship, tree-farm lease, etc.). Much can be done by the DENR's logistical resources especially with the new surveying means using the Global Positioning (GPS) and the Geographic Information Systems (GIS). These tenure instruments must however contain an ecological encumbrance or an environmental lien, an 'eco-lien.' Using the innocuous provision of the law requiring lands 10 degrees in slope or higher to be in sufficient vegetative condition<sup>14</sup>, an annotation can be made on the tenure instrument mandating that the appropriate portion of the land be afforested and/or subjected to the sloping agricultural land technology (SALT) and contour farming. Like a mortgage lien, the State must have an "eco-lien" on the land over and above all liens and encumbrances.

Support can also be offered in the propagation of seedlings and a food-for-work program utilizing the "bayanihan" system to undertake area-wide SALT or afforestation activities. The Bayanihan system is a Filipino social practice of community action and mutual help. In the rural areas, the practice is common especially when someone's house is being transferred to another place. In such a case, all the men in the village gather around for half a day or so to physically carry the house on their shoulders to the point of destination. It is lifted by tens of men without any compensation except for a simple fare of rice, beans and fish provided by the houseowner. The prospect of using this cultural value in reforestation/land contouring activities presents many positive possibilities.

Another incentive is a tax exemption from real property taxes of the planted trees. Under the present state of the law, each and every single tree standing on private land is levied a realty tax on the theory that it is an "improvement" on the land in much the same manner as a house or a building<sup>15</sup>. It is submitted that this is contrary to the articulated public policy of

encouraging tree planting. It is proposed that the DENR, in coordination with the Local Government Units (LGUs) and the Department of Finance, work for the abolition of this burdensome and ineffective tax. A preliminary analysis of the revenue stream derived from this tax is a minuscule 0.001% of the LGUs income. Instead of levying a tax on standing trees, these trees should be granted a tax credit or rebate applicable to, but not to exceed, the realty tax due on the land. It is a form of reward to the consumers for their compliance with the mode of conduct being encouraged.

Given the popularity of lotteries and other games of chance in the Philippines, the government can conduct regular raffles in order to promote the goal of soil and water conservation. Raffles are promotional gimmicks effectively used in marketing campaigns. There is no reason why they could not be used in legal marketing. For example, government can assign numbers to trees or to lands which have been well-vegetated. These numbers can be periodically raffled and the winners will be given very valuable prizes. Thus, individuals would have a greater stake in the preservation of their trees because each tree would be of greater value to the planter than just its seemingly unseen ecological benefits.

Another promotional technique may be to assist large landholders to exempt their lands from coverage of the Agrarian Reform Law. Under the Comprehensive Agrarian Reform Law<sup>16</sup>, all private lands of more than 5 hectares owned by one person shall be acquired by the Government for distribution to the tenant farmers. Under a more recent law, Rep. Act 7881 (1995), private lands devoted to reforestation or those with a slope of 10 degrees or higher<sup>17</sup> are exempt from the land reform law. Unfortunately, hardly even the Department of Agrarian Reform (DAR) personnel know about this law. The ignorance of the general population is symptomatic indication of the failure of the education and communication component of the legislative and legal system.

### 3.2.2 The needles

Even if the land is classified as alienable and disposable and is covered by a Torrens Certificate of Title (TCT)<sup>18</sup>, the Forestry Code mandates that it must still be kept in "sufficient vegetative condition"<sup>19</sup> to prevent erosion. This provision, implemented creatively, can be the basis for the abovementioned ecological encumbrance/environmental lien. It is the general impression of Government functionaries that when land is titled to a private person, the Government loses all control of it. This is not so. Under the provision above cited, the State retains an ecological encumbrance.

The law also provides that "when the public interest so requires, steps shall be taken to expropriate, cancel defective titles, reject public land applications, or eject occupants thereof"<sup>20</sup>, i.e. of private lands whose owners fail to keep the same in sufficient vegetative condition.

The threat of eviction from one's land, troublesome legal cases and the filing of multiple criminal charges such as for arson (in the case of slash-and-burn "*kaingin*" activities)<sup>21</sup>, intentional destruction of government property, malicious mischief, unlawful occupation of public forest lands, with a prayer for injunction, and multi-million environmental damages *in seriatim*, will legally rattle any would-be environmental malefactor.

### 3.3 Industrial pollution

Industrial pollution should be the easiest environmental issue to address for the following reasons: 1) the point sources and owners of industrial establishments are easily identifiable; 2) industry has some financial capacity; 3) profit enterprises are sensitive to economic incentives and penalties; and 4) the owners/CEOs are highly vulnerable to legal surgery.

The Pollution Control Law of 1976 provides for a comprehensive legal framework on industrial pollution. However, imperatives of economic development have overtaken its implementation. Further, the administrative bureaucracy which handles industrial pollution is ineffective. In addition to the domestic wastes, industrial pollution is the cause of the eutrophication of the rivers of Metropolitan Manila. While a law on toxic and hazardous wastes has been recently enacted<sup>22</sup>, the waste generators have not even bothered to register their establishments or wastes in accordance with the law. There is a near total failure in environmental law information, communication and implementation.

### 3.3.1 The candies & needles

Candies are to children what money is to a businessman. The candies must be economic in nature and must be made irresistibly palatable. Incentives may include a grace period for industries to resolve their environmental management/pollution control issues and achieve compliance within a reasonable period.

The first step in this socio-culturally sensitive approach is to identify point sources of solid and water wastes. This identification process must include not only the names of the companies/establishments but should also include the names and addresses of the Chief Operating Officers/ Presidents and Chairmen of the Boards<sup>23</sup>. They are the persons most directly responsible and concerned. They too have the power and the authority to make big decisions. Moreover, they are the most sensitive to the legal needles.

Having been thus identified, the top officers of the DENR (Secretary, Undersecretary) and the respective Regional Directors may proceed to personally meet with the executives concerned individually or in small industry or sectoral groups. This will capitalize on the highly personal character of Filipino culture and social relationships. In addition, the meeting will also create a measure of psychological tension on the part of the executives. Being personally identified is both an honor, when one is doing right, and a source of apprehension, when it is otherwise.

It is a fact that many of the establishments, especially the small and medium scale industries and those in their infancy, will not be able to immediately afford waste treatment facilities. The owners and officers of the establishments must first be given evidence of their pollution load. It is impressed upon them that this issue has to be addressed one way or another. This gesture will also impress upon them the existence of a determined political will on the part of the government. With the overall awareness and concern for environmental protection, most, if not all, of the industrial establishments would like to address their pollution. The secret lies in giving them the opportunity to do it in a manner that they will find difficult to resist.

The executives are then informed that it is not the government's intention to close them down. Immediate closures are not only culturally inappropriate for being confrontational, it also results in economic dislocation which the country can ill-afford. Instead, they will be given time to install the proper equipment or otherwise minimize their wastes. They can be asked how much time they need. If it is one year, they can be given one and a half years or even two years. This will entice them into agreeing into a *modus vivendi*. It will also create a debt-of-gratitude ("*utang na loob*").

In order to sweeten the proposal, the concept of a revolving door environmental fund (REFUND) can be introduced. The fundamental premises by which the concept of REFUND operates are: 1) application of the "polluter-pays-principle". With the industries discharge of pollution loads, they must bear the cost of the clean-up which would otherwise be solely borne by others and/or the government; 2) application of the true-value system in the costing of environmental resources. Industries must price their products accordingly so as to reflect the true cost of the manufacturing process which includes the waste disposal and not treat the

environment as a "free dumpsite"; 3) realization that industrial establishments are not immediately able to address their pollution. The technological and financial constraints are the stumbling blocks to full compliance. As an incentive to strive for compliance, the industries are not immediately penalized, rather they are given ample time to do it; 4) The governmental focus shifts from being regulatory to being developmental. With an insufficient bureaucracy where regulation often results in massive financial investments, gross inefficiency, or corruption, the private sector's resources must be harnessed to address their own pollution problems.

### 3.3.2 Operational framework of the REFUND incentive

The REFUND will be applicable to present industrial establishments, especially small and medium industries whose emissions, discharges, and/or wastes are in excess of the regulatory standards. They are afforded a period of time within which to reach the standards through the regulatory mechanism of variances. The following is the proposed operational framework for REFUND.

First, there must be an identification of common wastes. This is important so as to properly site and design an efficient Common Waste Treatment Facility.

Second, there must be an environmental user fee (ENUF) for every unit in excess of standard. Every unit in excess of the standard shall be given an equivalent amount. This can be roughly approximated using the methodology of environmental accounting. To make it more attractive, a discount can even be given. This is an added "utang na loob" on the part of the industry. The trend of jurisprudential authority indicates that where there are administrative agencies better equipped to resolve the technical issues, the Courts will generally keep its hands off<sup>24</sup>.

Third, the funds collected can be deposited in a trust account. They must not be paid to the government coffers lest they be lost in the black hole called the National Treasury. It can be deposited in a trust account to be held jointly by the industrial firms concerned, a government representative and, for the purpose of transparency, a representative of the Philippine Chamber of Commerce and Industry (PCCI) or a reputable NGO.

Fourth, the funds collected from firms with common waste streams shall be used as seed capital for them<sup>25</sup> to put up a common waste treatment facility (CWTF). If the funds are not sufficient, the government can assist the firms in securing a soft loan from financial institutions. The common firms will be responsible for choosing the technology and equipment suitable to their needs. Profitable enterprises are often better than government in the selection of the appropriate and most efficient means to ensure the viability of the undertaking. To sugar the pot further, government can provide other investment incentives such as tax holidays, real estate tax exemptions, etc<sup>26</sup>.

Fifth, the operation of the facility will be conducted by the firms concerned. The mode of cooperation may be in the form of a joint venture corporation, a consortium or even a cooperative. The services which can be offered by the waste facility may include the transport of wastes to and from their sites, actual treatment and disposal, environmental consultancy, and other like activities. The users of the facility, including others of common waste streams, shall pay a corresponding amount. This will ensure the financial sustainability of the enterprise.

To illustrate, assume that five companies (A-E) are now in excess of standards in varying degrees. Closing them down immediately is not a viable option because of the unemployment consequences and economic dislocation. Thus, an agreement is for a realistic period of time to arrive at compliance. In the meantime, they shall be required to pay a corresponding amount for every unit in excess of standard. This is simply an application of the polluter-pays principle. (See Figure 1.)

Another benefit of having those with greater pollution loads pay more is that they will begin to seriously consider "start-of-the-pipe" waste reduction measures. It must be recalled that pollution is often the result of the inefficient manufacturing process. A few common-sense techniques in materials management can reduce the waste significantly.

In a short period of time, the collected funds will build up into a substantial amount. This amount can then be used as seed capital for the construction of a common waste treatment facility. For example, for a period six months<sup>28</sup> the industrial firms will be allowed to: 1) build up the fund; 2) explore the appropriate technology and financial mechanisms; 3) engage consultants for the common waste treatment facility design and construction; 4) select and negotiate for sites; and 5) undertake such other related activities.

For the purpose of monitoring, a time chart may be made and agreed upon by both parties. Existing DENR regulations allow for up to 24 months of variance. Thus, 1,500 x 30 days (or the appropriate number of working days) = 45,000 (per month). 45,000 x 6 months = 270,000. Assuming the cost of the facility is 1.0 M, the amount to be loaned is therefore only 730,000. It may be pointed out that during the construction phase, the amount will continue to accumulate, thus further reducing the financing required.

The penalties, while eroded by inflation, are still stiff when imposed properly. A fine ranging from U.S. \$50-\$200 per day can be imposed. In addition, imprisonment can be imposed upon the person, natural or juridical, responsible for the violation. The concerned industrial establishment can also be subjected to immediate closure.

The creative application of the principle of swift, painful and public justice, can be used to expose the owners of the industrial firms who persist in environmental misbehavior.

### 3.4 Advantages of the proposal

The advantages that arise from this proposition are as follows:

- a. Government ceases being a "policeman" and instead becomes a promoter of responsible environmental management.
- b. Government takes a back seat in the promotion of pollution control and is left only with the monitoring of compliance according to the time frame agreed upon by Government and the industrial establishments concerned.<sup>29</sup>

**Figure 1. Company Exceedance of Standard Environmental Cost**

	(eg. ₱1.00 per mg/liter) <sup>1</sup>	
A	500 mg/liter	500/day
B	400	400
C	300	300
D	200	200
E	100	100
<hr/>		
Total	1,500 mgP	1,500

<sup>1</sup> The very nominal amount of ₱1.00 is used to simplify the arithmetical illustration. Environmental accounting however, indicates that very substantial amounts can be assessed. ₱1.00 = US \$0.38

- c. Funds derived from pollution charges/environmental user fees are directly channeled back to environmental management. Moreover, private funds are harnessed to address a public sector concern. This is important for a cash-strapped economy.
- d. There is less confrontation and more cooperation between Government and the concerned sector. This is how Filipino society traditionally operates—by cooperation, “Bayanihan”, lending a helping hand.
- e. Polluters are converted into environmental managers.

The foregoing are some of the examples of how the approaches of legal marketing can be applied to several other environmental issues in lieu of conventional law enforcement. Law enforcement is necessary only when there has already been a violation. Environmental law however, must apply in a precautionary and/or preventive manner. This is because environmental damage is often permanent, irreversible, or extremely expensive to remedy. Thus, violations, and its resultant damage, must be avoided as much as possible.

#### **4 CONCLUSION**

It is said that the absence of alternatives clears the mind marvelously. Thus, in the implementation of the law, the candies must be so attractive and so sweet and the needle must appear, and be, so sharp and so painful that the consumer of the law is left with no options.

The law is not a dead language that should be understood only in the gobbledygook of lawyers, judges, legislators and the members of the arthritic governmental bureaucracy. The law, and the reason for the law, must be popularized in the same manner that particular brands of soft drinks are popular the world over. The law must be understood by, and be a common reality for, all of those concerned. They — the general public — are the “target market” and the “consumers” of what the law seeks to sell. In Environmental Law, the social product being sold is the ecological balance that results in general sanitation, food and water security, cleaner waterways, cleaner air, affordable supply of wood, reduced erosion and siltation, reduced flooding, etc.

It is not enough that the target market is made aware of the product. Awareness without action is not a “sale.” Thus, the objective of legal marketing must not only be to develop an acute awareness; it must also create a real need. Only when a real need is created is information transformed into action. Then, and only then, will the Law become a living reality in the minds and in the hearts of each and every member of the target market — every man, woman and child.

#### **REFERENCES**

1. The basic environmental laws of the country are:  
Presidential Decree No. 1151: The Philippine Environmental Policy, 12 Vital Legal Documents (VLD) 1  
Presidential Decree No. 1152: The Philippine Environmental Code, 12 VLD 3;  
Presidential Decree No. 984: National Pollution Control Law (PD 984);  
Presidential Decree No. 1586: Environmental Impact Assessment Law; Presidential Decree No. 704: Fisheries Decree of 1975, 6 VLD 36; Presidential Decree No. 705:

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Forestry Reform Code; Rep. Act No. 6969: Toxic Substances and Hazardous Wastes Law; Rep. Act No. 1786: National Integrated Protected Areas System; Presidential Decree No. 1067: Philippine Water Code; and, Presidential Decree No. 825: Sanitation Code. Republic Act No. 386: Philippine Civil Code, particularly the provisions on Nuisance, Torts and Damages and Human Relations also find application.

2. Section 16, Article II, 1987 Philippine Constitution.
3. Presidential Decree 705 (1975)
4. Also known as the 18% slope, i.e. 1.8 m. x 100m.
5. Sec. 15, *ibid*.
6. Enacted in 1975.
7. The mere fact that they are identified is enough to cause the necessary psychological tension.
8. The invitation to sawmillers, lumber dealers and other persons engaged in the industry is not premised on the suspicion that they are "illegal loggers". Rather, it must be premised on the fact that more than anyone else, they are in a better position to assist in the effort to curb illegal logging.
9. Violation of the penal provisions of the Forestry Code (Presidential Decree No. 705 & Executive Order No. 277).
10. For failure to pay forestry charges, an internal revenue tax equivalent to 25% of the value of the wood as provided for by Republic Act No. 7161 The Local Government Code of 1991.
11. Violation of the penal provisions of Presidential Decree No 1612, the Anti-Fencing Law.
12. It is a Filipino saying that goes, "Kukunin sa pa-upo, imbis na sa patayo." This saying literally means to take/do things sitting down rather than standing up. Figuratively, it means using persuasion and consensus instead of confrontation.
13. Meaning: "to talk things over." This is also a general trait in Asia.
14. Presidential Decree. 705, section 15 (on topography).
15. Presidential Decree. 464, Sec. 40 (e.)
16. Rep. Act 6657 (1988).
17. The scientific basis of this criterion is that with 10-degree slope, land is already vulnerable to water run-off and erosion unless proper soil and conservation measures are instituted.
18. Proof of ownership of a parcel of land, the metes and bounds of which are particularly described therein, adopted under the Torrens system of land classification.
19. Sec. 15, para. 2, PD 705 (Forestry Code)
20. Section 15, Pres. Decree 705, final proviso.
21. *Kaingin* is a slash-and-burn method of farming which is a very destructive form of land use conversion, i.e. from forest land to marginal agricultural land.
22. Republic Act 6969 (1991)

23. The owners of industrial establishments, Chief Executive Officers, Chairmen of the Boards and other persons principally responsible are hereinafter collectively referred to as executives for brevity.
24. Technology Developers, Inc. vs. Court of Appeals, et al. (G.R. No. 94759, July 31, 1991) where the Supreme Court held that the Environment Management Bureau (Pollution Adjudication Board) with its technical staff is in a better position to examine whether there is in fact pollution in a given situation.
25. Common waste stream establishments are hereinafter referred to as "common firms".
26. Pollution control equipment is exempt from real property tax. (Sec. 234, RA 7160) This is a fairly new provision of law hardly known by the sectors concerned. Government can even extend the exemption to the land on which the treatment facility is constructed.
27. The very nominal amount of 1.00 is used to simplify the arithmetical illustration. Environmental accounting however, indicates that very substantial amounts can be assessed. P1.00 = US \$0.38<sup>1</sup>
28. This can be longer depending on the level of complexity or cost of the technology required.
29. To stretch the analogy further, it is like government being driven in a chauffeured car. All it does is to set the direction, check halfway if the car is moving and on the right direction, and check again at the designated stop (time-frame) whether the destination has been reached.

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## THE MEXICAN ENVIRONMENTAL AUDIT AS A VOLUNTARY NORM

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### SUMMARY

In 1992, the position and organization of the Federal Attorney for Environmental Protection was created. One of its objectives is the implementation of the Environmental Audit Program. The Environmental Audit in México is being used as an "autorregulation," or voluntary norms with the following objective — to minimize industrial risks through pollution prevention and control.

### 1 INTRODUCTION

Several aspects make enforcement of environmental laws an especially difficult affair in Latin America.

The international division of work has condemned developing countries to an increasing dependance on exploitation of their natural resources in a non-sustainable way, in order to relieve the extreme poverty that currently exists.

Although the relationship between debt vs. natural resources or world trade vs. environment still remains unclear, there is no doubt that the developing countries have had to reconcile their population's increasing demand for basic goods with the exhausting repayment of debt. Furthermore, we have had to promote industrial activity and provide the necessary framework for foreign trade while simultaneously protecting our environment, which includes our more valuable belonging: human life.

Within a globalization framework at the international level, we have committed ourselves to comply with international agreements around global issues requiring immediate attention. Those commitments have highlighted the limitations of our environmental sector, but also have fostered efforts to face a reality that cannot be postponed.

Taking into account increasing awareness about the environmental risks that the world faces, we must notice that the solutions given to those problems more often are corrective than preventive. In this point of view the last ones are useful tools to avoid ecological imbalance.

### 2 BACKGROUND

The main results of this approach have been:

- deterioration of world population's quality of life, very fast in some cases;
- perceptible change in atmospheric composition, especially CO<sub>2</sub> concentrations (the main greenhouse gas);
- damage to the stratospheric ozone layer;
- harmful accidents related to industrial plants; and

- improper management and final disposal of hazardous wastes in general and toxic wastes in particular.

This situation has become sharper in industrializing countries for several reasons:

- their traditional lack of control;
- the vicinity of industries and populated areas;
- the constant population pressure over free spaces;
- the recurrent financial and market crises; and
- the lack of operational programs for emergency response.

The population and environmental components are exposed to unnecessary risks by all of these factors.

Those risks have become real by lamentable accidents. Perhaps the most well known of them occurred in 1984 when a toxic puff from a Union Carbide pesticide plant near Bhopal, India, was inhaled by 300,000 people. Nobody was aware that methyl isocyanate, the gas released, could be so noxious. Everybody knew that methyl isocyanate is toxic, but it was supposed that no one would have contact with it because it is an intermediate product. Consequently, the proper measures were not taken. Later in the same year, some liquid propane gas storage tanks exploded in San Juan Ixhuatepec, México, killing more than 400 people, according to official reports.

These kinds of accidents, however, are not only present in developing countries. In 1976, an uncontrolled chemical reaction in an Hoffman-LaRoche produced a puff of one of the most toxic substances known: dioxin. This cloud was carried by the wind towards Seveso, Italy, provoking one of the most harmful accidents of the chemical industry in this century.

The common aspect of these accidents is the absence of an opportune diagnostic of their possible risks. They point out the need to review systematically industry operations in order to detect the likelihood of facing similar problems in the near future. That is the origin of the environmental audit, the proactive device by nature, the autorregulation tool par excellence.

### **3 THE ENVIRONMENTAL AUDIT**

The development of auditing skills as environmental management tools started in the mid-1970s when several companies, working independently and by their own initiative, developed internal management tools to help in the assessment and review the status of their operations.

Since then, environmental auditing programs have evolved until reaching a high grade of specialization in pioneering countries, which have allowed the government authorities not to have a key role. Let me get back to this issue later.

The creation of PROFEPA was led by the explosions which took place in Guadalajara 1992; the tragedy is still present in national awareness. Among PROFEPA'S functions is to implement both enforcement of environmental laws and the environmental auditing program as a proactive mechanism to avoid risks.

The PROFEPA's main function is enforcement of the law in order to protect the environment. This goal is achieved basically in two ways: inspection (with its related enforcement authority to shut down operations) and the environmental audit. The first one is a powerful legal action with a big limitation. The Federal Government can only demand the compliance with such items that have already been regulated.

Since the environmental audit is voluntary, it can involve all those aspects that have not been regulated yet, which however, must be solved immediately.

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The Federal Government decided to use the non-punitive environmental audit approach due to the current situation in México. This situation can be outlined as follows:

- almost no environmental legislation compliance during 21 years;
- enormous amounts of hazardous wastes improperly stored and disposed;
- almost total absence of environmental consciousness;
- unfinished and dislocated legal framework;
- lax mechanisms of compliance;
- incipient environmental sector;
- incipient ecological and territory planification;
- obsolete production technology; and
- scarcity of fiscal and credit politics.

All of these features promoted an industrial sector which was reluctant to analyze its environmental reality, so the Federal Government had to convince the industrial sector by explaining the environmental audit's real goal. In addition, to foster the environmental audit program, if an enterprise decided to enter the environmental audit program, PROFEPA would exclude it from normal inspection activities. Nevertheless, the industry would be inspected if a public law complaint were presented or a contingency occurred.

Environmental auditing is therefore the way that an industry can choose to comply with its environmental obligations. It basically consists of a methodological review of its production process in order to know the pollution and risk conditions under which it is operating. The degree of compliance is also defined. Likewise the environmental audit includes items not regulated yet but controlled internationally through good engineering practices. It defines and compels the application of preventive and corrective measures needed to protect the environment. All this is done confidentially, as the legal framework demands.

The essence of the environmental audit is to verify, analyze and assess the adequacy and application of risk minimization and pollution control to the enterprise.

#### **4 MÉXICO'S CASE**

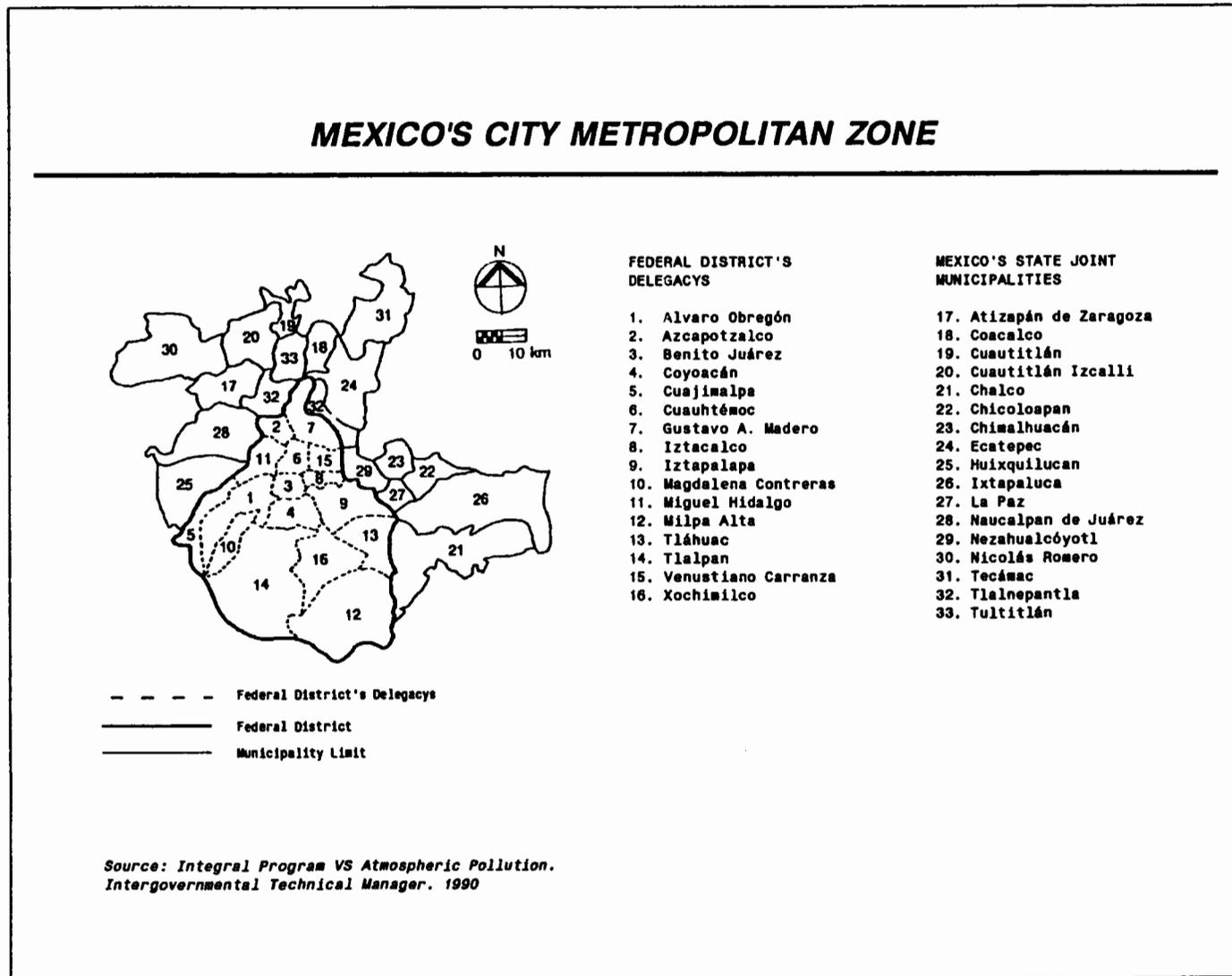
Let me show you some data about one of our main worries, México City metropolitan zone.

México City metropolitan zone embraces 16 delegated Federal Districts and 17 State municipalities, and its inhabitants have grown 2.54% annually in the last two decades. Such a big city offers cheap labor, services and great market opportunities. This is why it has strongly attracted every kind of industry (see Figure 1).

The ultimate result is that within a 2,000 square kilometers city there are about 30,000 industries of all sizes and classes of industries besides 18 million people. Moreover, in some parts of this crowded city, risks are high; almost 44 million tons of hydrocarbon fossil fuels are burned and nearly 600 metric tons of solvents are used day in and day out.

To a smaller degree, a similar situation is presented in the metropolitan zone of Monterrey and Guadalajara Cities. Of special concern are the northern border region and the industrial corridors of Coatzacoalcos-Minatitlán, Tula-Vito-Asasco, Tampico-Madero-Altamira, and Irapuato-Celaya-Salamanca (see Figure 2).

Figure 1



## COUNTRY'S PRIORITY ENVIRONMENTAL ATTENTION ZONES

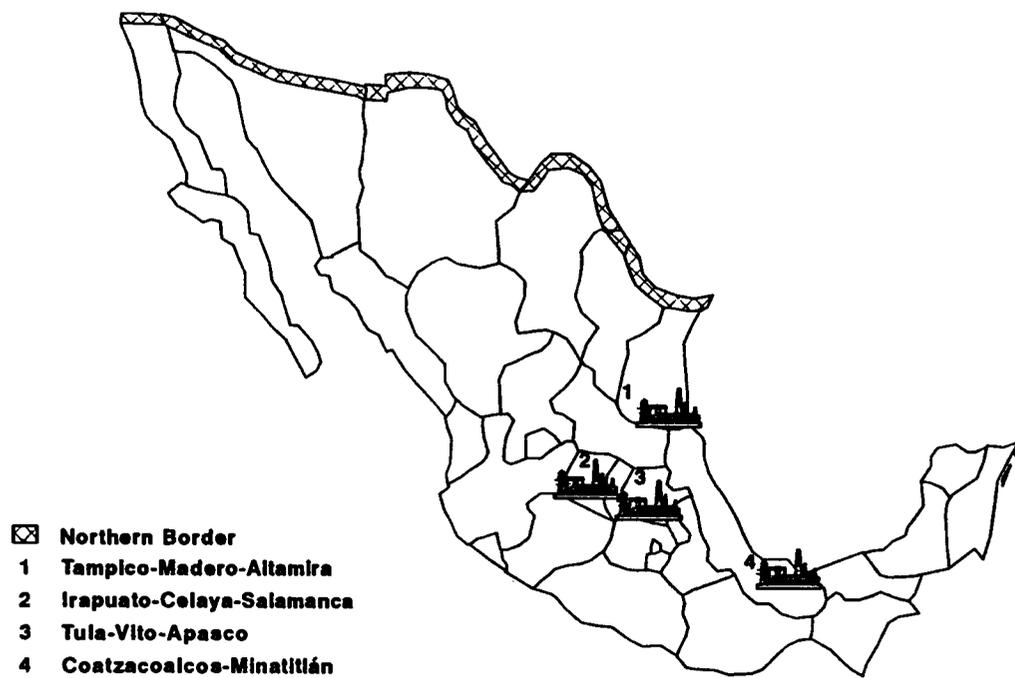


Figure 2

The federal government decided to start the auditing activities in dangerous enterprises located in those areas. As we expected, the bigger industries were selected in this step. Lately PROFEPA has been inviting the other industries to join the environmental audit program.

Reviewing the 1994 economic census from the National Institute of Statistics, Geography and Data Processing, the micro, small and medium industry comprise 99.2% of the total manufacturing establishments. They hire 55% of the total personnel and generate 38% of total income. On the other hand, the big industries comprises 0.8% of the total industrial plants, hire 45% of the personnel and receive 62% of total income.

In México, like most countries, the smaller enterprises constitute the manufacturing activity bases. Moreover, they offer most of the employment. However, given the scarcity of governmental human and financing resources, the starting actions have been directed to the bigger industries for which control is easier because of its small number. They represent the highest risk situations, therefore their control is imperative.

Indeed, the Environmental Audit Program does not ignore the micro, small and medium industries. However, it is assumed that these enterprises are facing serious financial problems and have more urgent concerns than environmental activities. Aware of that, PROFEPA is looking for their participation in the program through a World Bank fund. In that case, the government would pay part of the audit expenses.

## **5 THE INDUSTRIAL RESPONSE**

The Mexican environmental sector is evolving quickly, the government is enforcing the law, citizen participation is rising and the industries are making considerable efforts to comply. In this sense, in the near future, "declaration audits" will be implemented. In this kind of audit, the auditors will be certified by the governmental authority and their reports will be accepted without review, unlike the present scheme which demands that reports to be supervised by PROFEPA.

Industries in México, especially those with corporate environmental policies, have echoed the official efforts to support proactive mechanisms for environmental management.

As a result, the "Environmental Protection and Industrial Competitiveness Covenant" between the Trade and Industrial Promotion Secretary (SECOFI), Environment, Natural Resources and Fishing Secretary and Industrialist Confederation Chamber was signed in September 1995. In this covenant, autorregulation was defined as intersectorial policies to develop and foster voluntary industrial environmental protection programs through mechanisms like raw material substitution, technological modernization, energy efficiency, recycling and, of course, environmental audits.

## **6 PRACTICAL RESULTS**

Environmental audits represent a preventive approach to pollution control and risk minimization. Its collateral results are: updating an industry in terms of environmental compliance and the processes's continuous improvement. This goal demanded enormous effort because of the fact that the country, jointly with its industrial plants, is facing severe financial problems.

Environmental Audit Voluntary Program results by August 1995 are as follows: 303 audits completely finished, 150 in progress, and 135 in any part of consultation process.

Among those audited, Federal Government enterprises stand out, such as the PEMEX'S petrochemical complexes, CFE's energy generation plants, National Mexican Railroads Workshops, etc. To give an idea about the required expenses, PEMEX by itself has spent more than US \$2 billion in the audit process as well as the Action Plans and remediation activities detected.

Although the concept of an audit is the same internationally, the Mexican concept of audit has special features. In Germany, Austria, Finland, France, United Kingdom, Belgium, USA, Canada and other countries, unlike México, the environmental authority has no key participation in the process. An industry in those countries decides to audit because of one or more of the following reasons: internal or corporate politics; improvement of its public image; non-government organization pressure; stakeholders decisions; financial requirements; etc. The government does not participate in the decision. Furthermore, the final audit reports are not destined for the environmental authority and the audited industry decides all by itself what to do and when. Therefore, in those countries, there is no official or compulsory way to do audit. However, the review of every matter related to the environmental question is a common practice, but without governmental guidance.

In México, PROFEPA has a key role. First of all, it promotes the entrance to the voluntary program and establishes the compulsory terms of reference for the audit; then it supervises the performance of the job and convenes with the industry representative of all the actions to be performed in order to correct the findings of the audit. Finally, it supervises compliance of the convened actions.

As a signatory of NAFTA, México is committed to effective compliance of its own environmental regulations. In this sense, and facing less and less regulated international trade, the environmental audit is now accepted as an environmental law compliance advice in terms of the North American environmental protection agreement.

In the same sense, as an active organization member, México will have to heed the Organization for Economic Cooperation and Development Council's recommendation on integrated prevention and control of contamination, issued on January 31, 1991, which indicates that environmental audit is one of the integrating mechanisms.

The environmental audit has demonstrated its effectiveness and has other interesting advantages as the possible elimination of penalties for self-identified, reported, and corrected items, provided that PROFEPA is notified in a spontaneous way and realistic and scheduled solutions and control and prevention measures are presented.

We must notice too that the environmental audit's terms of reference fulfill the environmental certification requirements internationally, such as ISO 14000. This will allow, in the near future, the environmental audit to become a requirement to obtain the commercial benefits acquired with the adoption of such international standards.

The ongoing PROFEPA environmental audit policy is to take care of the problems arising from bigger industrial installations, either public or private; Petróleos Mexicanos, Comisión Federal de Electricidad, Ferrocarriles Nacionales de México, Ford, General Motors y Nestlé are some examples of them.

All of this has a double effect: to minimize industrial risks and, on the other hand, promote adequate pollution control. We really think that Environmental Audit Program must be complemented with an appropriated enforcement policy. The Federal Attorney for Environmental Protection's general policy is intended to achieve this goal.

The Mexican environmental question is based on the "Think Globally, Act Locally" concept, so, we are committed to the preservation of the unique world we have.

In conclusion, let me be emphatic in saying that the main objective of Mexico's Environmental Audit Program is to achieve a better and healthier environment for all of us and to raise the quality of life for all Mexicans through a preventative approach.



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## **DUTCH INDUSTRIAL TARGET GROUP APPROACH: AN ENFORCEMENT STUDY ON THE VOLUNTARY ENVIRONMENTAL AGREEMENT WITH PETROL STATIONS**

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### **SUMMARY**

A major vehicle for achieving the Dutch environmental objectives is the industrial target group policy. Voluntary agreements are reached on achieving emission reductions of volatile hydrocarbons to the air, water and soil by the years 2000 and 2010. The agreed emission reductions are given concrete flesh in individual company environmental plans or in an environmental action program for a whole business sector.

This article describes the results of an enforcement study by the Inspectorate for the Environment into compliance with the environmental action program at petrol stations in the Netherlands. The program is based on an agreement signed in 1991 between central and local governments and trade-associations. The study investigated whether the petrol stations placing the greatest load on the environment had implemented the agreed environmental measures and what the enforcement role of the competent authority had been.

## **1 INTRODUCTION**

### **1.1 Reasons for the project**

The following environmental problems are particularly relevant at petrol stations in the Netherlands:

- soil and groundwater contamination by motor vehicle fuels;
- air pollution caused by volatile hydrocarbons;
- contamination of water caused by vehicle fuels and detergents;
- the risk of fire and explosion; and
- noise nuisance caused by delivery units and traffic (tankers loading and discharging as well as traffic arriving and departing).

With a view to resolving these problems, the Inspectorate for the Environment of the Ministry of Housing, Spatial Planning and the Environment, trade-associations, the Association of Netherlands Municipalities (VNG), and the Association of Provincial Authorities (IPO)<sup>1</sup> drew up an action program. This program contains a phased clean-up program to be put into practice by July 1999 (this is the date by which all stations in the Netherlands must have satisfied the requirements under the program).

The agreement was signed in September 1991. The associated action program was converted into a statutory arrangement, the Environmental Management Petrol Stations Decree (ref. 1), on March 1, 1994. This provides a statutory basis for implementing the activities in the program.

Petrol stations are classified into categories by environmental load. Stations imposing the heaviest environmental load have to satisfy the requirements at an earlier date (by March 1, 1994) than stations placing less of a load.

A soil survey is to be carried out at each petrol station. If the soil is contaminated, a soil clean-up plan has to be drawn up. A redesign plan also has to be submitted to the competent authority.<sup>2</sup>

After the clean-up has been carried out and the station redesigned, the station has to submit notification of readiness to the competent authority. The latter body checks whether the clean-up and redesign plan have been properly carried out.

## 1.2 The Dutch industrial target group policy

The government cannot solve the environmental problems by its own, let alone prevent new problems arising. Development focused on sustainability is only feasible if government, industry and non-governmental organizations make common cause. One major vehicle for achieving Dutch environmental objectives, as set forth in the National Environmental Policy Plans (ref. 2), is the target group policy. Agreements are reached with each branch of industry, for example the printing industry, the primary metals industry, the chemical industry, the wood-preservation industry and petrol stations on achieving emission reductions by the years 2000 and 2010 compared to the base year of 1985. The reductions are recorded in what are termed integrated environmental targets, which constitute part of the agreement signed between government and industry. In the case of petrol stations, for example, the environmental objectives are given concrete flesh in the aforementioned action program.

Although the target group policy is a question of voluntary agreements, it is desirable that the agreements reached for individual companies be set forth in the environmental licence, so that the agreements are enforceable. In the case of petrol stations, the environmental measures included in the action program are set forth in the Environmental Management Petrol Stations Decree. In this manner, the agreed measures are amenable to enforcement.

What is the role of the Inspectorate for the Environment in the industrial target group policy? On behalf of the Minister of Housing, Spatial Planning and the Environment, the Inspectorate monitors compliance with the environmental and emission reduction targets set forth in agreements by the industrial target group. This is achieved by performing sample checks on compliance with the agreements (implementation by companies and implementation of the concrete measures in environmental licences).

## 1.3 Project objectives

The project includes the following three objectives:

1. Gaining understanding of the way in which industry is implementing the program.
2. Gaining understanding of the way in which the competent authority is implementing its responsibility for monitoring compliance with the program.
3. On the basis of 1 and 2, making a pronouncement on whether the in the action program has been achieved.

#### 1.4 Structure and approach to the project

The project spans petrol stations throughout the Netherlands. A study group was assembled on a random basis from those stations imposing the heaviest load on the environment and which ought to have been cleaned up by March 1, 1994. The sample covered 50% of petrol stations that ought to have been ready.

A questionnaire developed specifically for the purpose was the basis for an integrated check on the study group by the Inspectorate for the Environment between October 1994 and January 1995, the results of which provide some insight into compliance with the action program by petrol stations and the way in which the competent authority has discharged its responsibilities. Company checks were carried out in cooperation with the competent authority where possible. In cases where shortcomings were discovered, the competent authority was requested in writing to take enforcement action.

## 2 IMPLEMENTING THE STUDY AT PETROL STATIONS

### 2.1 Description of general data

Before the action program was drawn up, there were 7,304 petrol stations in the Netherlands. The activities required for the program can be divided into four phases:

1. Conducting a soil survey.
2. Drawing up a soil clean-up plan.
3. Implementing soil clean-up.
4. Redesigning the petrol stations to meet air, water, and other requirements.

Companies lacking the financial resources to fund the soil clean-up and redesign were able to apply to a Clean-up Fund. One condition was that after admission to the fund, the petrol station would close down operations within three months. An agreement for a contribution from the fund was signed with 1,917 companies. The action program no longer applies to these stations. It was also found that 523 companies fell outside the scope of the program, either because these were not public points of sale or because they had already ceased operations.

In total, there remained 4,864 companies that did fall within the scope of the program. 218 of these ought to have notified that they were ready by March 1, 1994. These 218 companies constitute the study group from which 107 stations were selected randomly.

The checks revealed that only 76 companies, which were still in active operation, actually qualified for the study group. Those omitted were stations that were found to no longer exist or which closer inspection revealed as belonging to a different category, placing less of a load on the environment.

### 2.2 Results

The 76 companies selected were studied on the basis of the four phases of the program. The results of the soil clean-up are discussed in section 2.2.1, covering the first three phases of the program. Section 2.2.2 then reports progress made in redesign of stations, the fourth phase of the action program.

### 2.2.1 Phase 1: conducting soil survey

Each of the 76 companies was checked to ascertain the scale on which soil and/or groundwater surveys had been carried out. The requirement to perform research into soil contamination had been met in over 90% of cases. The first phase had been completed at virtually all the petrol stations investigated.

### 2.2.2 Phase 2: drawing up clean-up plan

The study revealed that 62 of the 76 companies required clean-up of soil contamination. Before the clean-up proceeds, the clean-up plan has to be drawn up and submitted to the province for review. Compliance with the second phase of the program was moderate. Approximately 20% of stations had not yet started drawing up a clean-up plan or were still busy working on it.

### 2.2.3 Phase 3: implementation of soil clean-up

At petrol stations where soil clean-up was required, 32 stations (52%) had completed their clean-up, whilst 30 stations (48%) had not completed their clean-up or only partially so. Of the 30 stations that had not (yet) cleaned up it was found that:

- 14 stations were busy with their clean-up operations.
- 6 stations had performed soil surveys and had drawn up clean-up plans, but implementation of clean-up had still to start.
- 10 stations were still busy with soil surveys and discussing them with the competent authority.

The third phase of the action program had not yet been sufficiently implemented. Slightly more than half the number of clean-ups had been completed at the time of the study (October 1994 - January 1995). Further investigation among companies that had not yet completed the clean-up indicated that two thirds of them were busy with the clean-up or could start within the near future.

### 2.2.4 The fourth phase: redesign

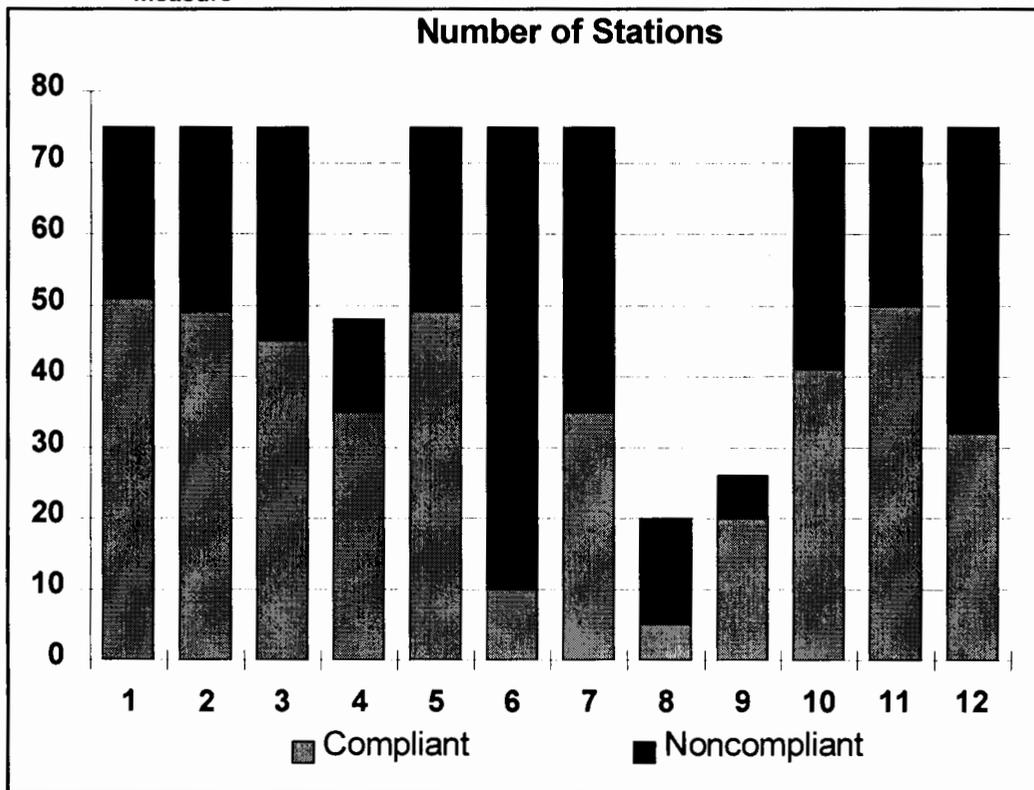
The preventive action to avoid future soil contamination has to be taken during the third phase, or after completion of the third phase of the program. This section describes the results of the study into the main elements of the redesign. All 76 stations were included in the study and not just those that had completed the third phase. The reason for this is that the redesign requirements also apply to stations that have not yet cleaned up. Figure 1 shows the results for each measure or provision.

#### 2.2.4.1 Soil protection measures

In terms of soil protection, the liquid-proof floor or pavement, protection of the filling point, the leak-detection systems and inspection of the cathodic protection of underground tanks and pipes were investigated<sup>5</sup>. The state of affairs with each of these points is discussed briefly below.

1. Liquid-proof floor  
52 stations (68%) of the 76 petrol stations had a liquid-proof pavement, which prevented any fuel spillages during filling from entering the soil.
2. Protection of the filling point  
49 (64%) of the 76 stations had a drip tray or some other device to catch any spillages during the filling of underground fuel tanks.
3. Leak-detection system

Figure 1. Number of petrol stations scoring positively or negatively against each measure



- 1 = liquid-proof floor
- 2 = protection of filling point
- 3 = leak-detection system
- 4 = corrosion protection inspection (cathodic protection)
- 5 = vapour-return system
- 6 = presence of complete installation log
- 7 = static delivery units
- 8 = mobile delivery units
- 9 = car wash facilities
- 10 = anti-collision devices at filling point
- 11 = static electricity earthing point
- 12 = soil resistance report

There are two ways of using a leak-detection system for identifying soil contamination:

- By means of groundwater measuring tubes which are sampled at least once a year.
- By connecting leak-detection systems equivalent to the measuring tubes. For example, electronic detection which identifies hydrocarbons.

46 (61%) of the 76 petrol stations had fitted at least one of these provisions. Seven companies were using several systems simultaneously. Thirty companies failed to satisfy this requirement.

#### 4. Cathodic protection inspection

Cathodic protection of underground tanks and pipes has to be checked annually. 27 companies did not have any cathodic protection present and inspection was therefore not applicable. Of the 49 remaining stations, annual inspections were performed in 36 cases (73%). This annual inspection was not being conducted in 27% of cases or in any event there was no written evidence to this effect.

28 stations (37%) satisfied all the mandatory soil protection provisions (cathodic protection where necessary). 14 stations (18%) had failed to achieve any of the mandatory provisions.

#### 2.2.4.2 Other measures

##### 5. Vapor-return system

In order to prevent petrol vapors escaping from the underground tank when tankers are unloading, a vapor-return system is required, to return the vapors to the tanker. A vapor-return system was found to be in place at 49 stations (64%).

##### 6. Presence of complete installation log

The purpose of the installation log is to record the results of measurements, inspections and checks on the units. The mandatory logs were found during inspection at nine (12%) of the petrol stations investigated. All the required forms were found at three of the nine.

##### 7/8. Delivery units

Delivery units are divided into mobile units, i.e. a delivery for mixed lubrication, and static delivery units.

The static delivery units satisfied the requirements at 45 stations (59%). The most common cause of failure to satisfy the requirements was that the delivery hoses were too long. They extended beyond the edge of the liquid-proof floor. It was also found that the quality of the hoses at one station did not satisfy the requirements. There was also one station where there was no separation between the cycle path and the delivery pumps. Anticollision devices to prevent collisions with delivery units were present at 50 stations (66%).

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Twenty of the 76 stations had a mobile delivery unit, and the unit satisfied the requirements at eight of them (40%). Deficiencies encountered included the absence of an overspill trap and too long delivery hoses. The set-up of the mobile unit was found to be good at ten stations (50%). At the other ten stations, the mobile unit was not totally affixed to the liquid-proof floor in a number of cases. Five stations (25%) satisfied the requirements as well as the set-up.

9. Car wash facilities. There was a car wash at 27 stations. A total of 6 of the 27 (22%) failed to comply with the requirements. The most common deficiency was the absence of a liquid-proof floor in the washing area.
10. Anticollision devices at filling point 28 petrol stations (37%) did not have provisions to prevent collisions with motor vehicles at the filling points for the underground fuel tanks.
11. Static electricity earthing point To avoid sparking caused by static electricity, a cable should be connected between the tanker and the underground tank during unloading. 26 stations (34%) did not have such an antistatic facility.
12. Soil resistance report. Soil resistance must be measured before underground tanks are laid. The soil resistance says something about the aggressiveness of the soil in which the tanks and pipelines are laid. Soil resistance measurements should be repeated every ten years. A soil resistance report with the results of the measurements was available at 32 stations (42%).

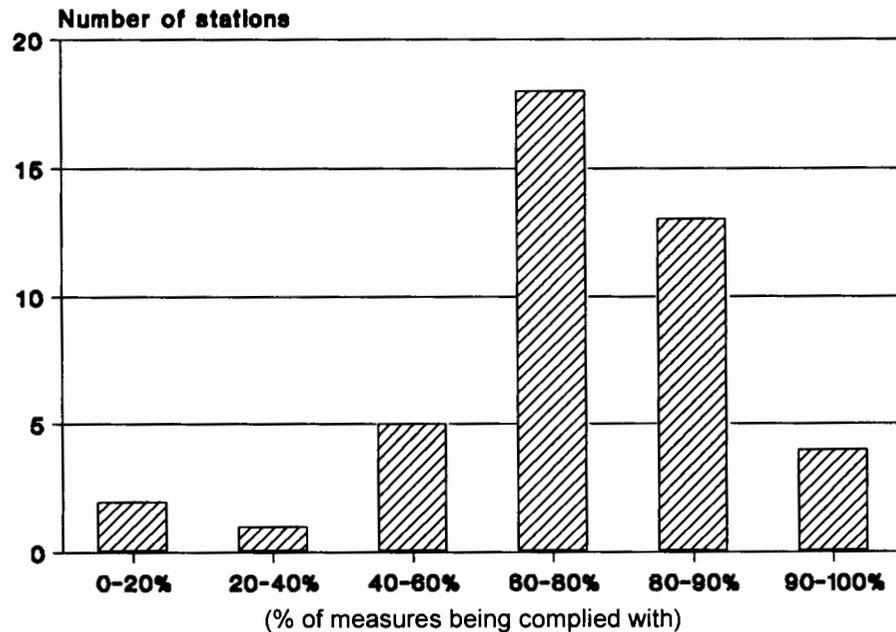
Assessment of the redesign at companies that have completed their soil clean-up operations and at companies where no soil clean-up is necessary revealed compliance with an average 79% of measures. Figure 2 shows the percentage of measures being complied with at cleaned-up companies and those not contaminated.

Progress in implementing the fourth phase (redesign) was modest. On average, 79% of the provisions were in place at companies where there was no further clean-up in operation (43 stations). This means that in a number of cases no preventive measures to avoid soil contamination had been taken.

41% of the measures had not been taken at all the stations together (76 companies). Figure 1 shows that in most cases the installation log is absent. Only 12% of the petrol stations had an installation log. Where it was present, however, it was often not complete.

It also emerges that many mobile delivery units fail to comply with the requirements: where present, only a quarter of cases satisfied the requirements. The picture with static delivery units is also poor. Fewer than half the units had anticollision devices and satisfied the regulations.

Figure 2. Compliance with measures for petrol stations where the soil is not contaminated or where clean-up is complete



### 3 THE COMPETENT AUTHORITY

All petrol stations in the Netherlands have to comply with requirements in the action program or the Environmental Management Petrol Stations Decree. Furthermore, any soil contamination identified must be cleaned up. The municipality and the province in which the petrol station is located are the competent authorities for implementation.

This chapter describes the responsibilities of the competent authorities and how they have implemented them.

#### 3.1 The responsibilities of the competent authority

Municipalities and provinces have a steering and corrective role to play in implementing the action program.

The responsibilities of the competent authority are described in this section on the basis of the four phases of the program.

##### 3.1.1 Phase 1: conducting soil survey

The municipality can urge a company to have a soil survey carried out, after which they must submit the survey report to the municipality. The municipality judges the results of this survey. If it is a clean-up study, the province is the competent authority and assesses the results.

### 3.1.2 Phase 2: drawing up clean-up plan

The province ensures that where soil contamination exists, the petrol station draws up a clean-up plan and submits it. The province announces its verdict within one month of receipt of the plan.

### 3.1.3 Phase 3: performing soil clean-up

The province is the competent authority for soil clean-up. It must monitor its implementation.

Upon completion of the clean-up the company has to draw up an evaluation report and submit it to the province for assessment. The province determines on the basis of the evaluation report whether the clean-up operation has had sufficient of an impact. The province will decide whether or not the clean-up has been effectively carried out within six weeks of receipt of the evaluation report.

### 3.1.4 Phase 4: redesigning the petrol station

The municipality must review the redesign plan drawn up by the petrol station. According to the action program, this must be done within one month. In addition, the municipality must monitor progress with the redesign.

Upon completion of the fourth phase of the action program, the company must notify the municipality. The municipality then checks whether the redesign has been carried out in accordance with the program or the Environmental Management Petrol Stations Decree.

#### 3.1.4.1 Periodical and interim checks

Municipalities perform periodical multi-media checks at the petrol station to check whether it is complying with the conditions of the licence and the Environmental Management Petrol Stations Decree. These multi media checks must be carried out at least once every two years. The municipality may also perform interim checks, for example in response to complaints or incidents.

#### 3.1.4.2 Actions

In the event of infringements against the regulations in the Environmental Management Petrol Stations Decree, the municipality must take enforcement action to terminate these infringements. These actions may range from reporting the company to applying such measures as coercion or closing a company.

## 3.2 Results

The situation was investigated to ascertain the progress achieved by the provinces in assessing the quality of implementation of soil clean-up operations. Of the total of 38 evaluation reports received, 18 were assessed and approved within the six-week period.

All 76 stations investigated ought to have cleaned up and redesigned by March 1 1994. There have been virtually no checks by municipalities on completed redesign. Only six stations had given notice of being ready and at the time of completion of the study, one had been checked. The main reasons for failing to notify completion are as follows: companies do not know how to do so and at the time of the study no standard notification forms were available. At the end of the inspection study in January 1995, 43 companies (57%) were ready with their redesign. On average, 79% of the measures had been implemented. Only two stations scored 100%.

Periodical multi media checks also proved to have been inadequately carried out by the municipality. In 1994 and 1995, a total of 34 checks were carried out (on 45% of the companies investigated). In practically all cases municipalities had taken enforcement actions against infringements of the environmental regulations.

## 4 CONCLUSIONS AND RECOMMENDATIONS

### 4.1 Conclusions

This section presents the main conclusions of the study on the basis of the objectives.

#### 4.1.1 Understanding how petrol stations are implementing the action program

The Inspectorate for the Environment carried out multi media checks on compliance with the action program at 76 stations from the group of stations placing the heaviest load on the environment. These checks revealed the following:

- Almost all companies investigated had completed the first phase of the action program (soil survey).
- The second phase of the program (drawing up clean-up plan) had been completed by approximately 80% of companies. The other 20% had not yet drawn up a clean-up plan required or were still working on it.
- Compliance with the third phase of the program (performing the soil clean-up) was poor: 52% of clean-ups were complete.
- The fourth phase of the program (redesigning the station) scored only modestly. 79% of the provisions had been made at companies where the soil clean-up was complete or not required (43 companies). The total study group of 76 companies was achieving compliance with 59% of measures.

Despite the fact that companies had done a great deal of work and that clear improvements could be observed, it has to be said that clean-up operations have in general been too slow. At the time of the study, and long after the latest date of March 1, 1994, 30 companies had not yet completed their clean-up operation. Nor had the redesign been carried out with due care. Often, provisions were missing and requirements were not being complied with. The conclusion is, therefore, that the action program has not been satisfactorily carried out.

#### 4.1.2 Understanding of the way in which the competent authority is implementing the program

The competent authority has a steering and corrective role to play, such as checking the results of the soil survey, approving the clean-up report, checking on clean-up, approving the redesign plan and checking the redesign itself.

The study showed that municipalities are not keeping sufficient of a finger on the pulse at petrol stations with a view to implement the action program. All stations placing the heaviest load on the environment which had not cleaned up or redesigned by March 1, 1994, are guilty of infringement. Municipalities have in general failed to monitor this sufficiently: in 1994 and 1995 multi media environmental checks were carried out on 45% of the stations investigated.

Finally, the clean-up plans are not always assessed by the province within the one-month period.

#### 4.1.3 Has the action program achieved the desired goal?

The study shows that the aim of the program, to avoid and limit the environmental load posed by petrol stations, has only partly been achieved. The target group has not taken sufficient initiative to curb environmental loading in time and voluntarily. Although not all stations were investigated, a representative study was carried out. The results of the study lead to the conclusion that many stations placing the heaviest load on the environment had not completed the action program by March 1, 1994.

The action program would perhaps have been carried out more effectively and with greater vigor if there had been better monitoring of implementation and introduction of the accompanying legislation, the Environmental Management Petrol Stations Decree. Apart from clear legislation, effective information, preferably in consultation with the trade-associations, is important. Every player, the authorities and industry alike, must be clear what is expected of them.

#### 4.2 Recommendations

The recommendations from the study have been grouped according to the various participating bodies.

##### 4.2.1 Provinces

- Assess plans and evaluation reports for soil clean-up by the specified deadlines.
- In cases of soil clean-up operations, exchange more information between all the parties involved (municipalities, petrol stations, executive agencies and water boards).

##### 4.2.2 Municipalities

- Develop a planned approach which provides for:
  - effective progress controlled via a milestone plan;
  - a timely start to the requisite procedures and redesign of the petrol station;
  - standardized multi media (progress) checks, including checks after completion of the redesign; and
  - coordination of other municipal agencies or departments, for example, Land Use planning.

##### 4.2.3 Trade-associations

- Develop a milestone plan for soil clean-up and redesign.
- Draw up a simple checklist for redesign, which can be discussed with the contractor/installer. This should include all major requirements.
- Develop a structure for an installation log and ensure that the log is actually present at petrol stations.
- Actively provide information on the environmental measures agreed in the context of the target group policy on petrol stations.

#### 4.2.4 Petrol stations

- Ensure effective and adequately relaxed planning of soil clean-up and redesign.
- Use the checklist developed by the trade-association for redesign.
- Upon completion, send in the notification of completion in good time.
- Instruct staff on environmental rules.

#### **ENDNOTES**

1. The Association of Netherlands Municipalities (VNG) and the Association of Netherlands Municipalities (IPO) can be described as cooperative associations of municipalities and provinces in the Netherlands respectively.
2. On the basis of the Soil Protection Act, the province is the competent authority for soil clean-up. On the basis of the Environmental Management Act, the municipality is the competent authority for redesign (implementation of other environmental measures) of the petrol station, including the soil survey.
3. Redesign means taking the measures and the provisions specified in section 2.2.2.
4. At the time of the study, there were three petrol stations where it was unknown whether soil and/or groundwater were contaminated. These were deemed stations with a need for clean-up in the study.
5. Cathodic protection protects underground tanks and pipes against (additional) corrosion by aggressive soil, such as wet (maritime) clay or peat. To determine the level of aggressiveness of the soil, the soil resistance of the ground should be established before underground tanks or pipes are laid.

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## **STIMULATING VOLUNTARY COMPLIANCE: NEW POLICY DIRECTIONS IN THE UNITED STATES: THE MINNESOTA EXPERIENCE**

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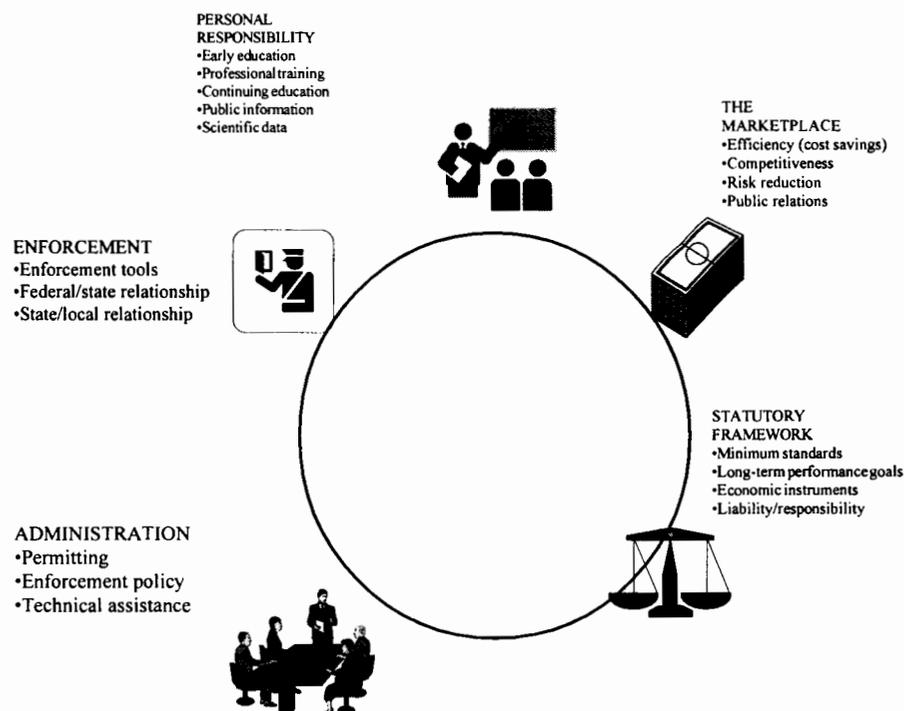
### **SUMMARY**

The principle goal of environmental enforcement programs is to contribute to improved environmental quality. To most effectively advance this goal enforcement officials must actively participate in efforts to stimulate voluntary compliance. In addition to significantly contributing to environmental improvement, successful voluntary compliance programs allow governments' always limited enforcement resources to be focused on poorer performing organizations, build support for enforcement efforts, and can help embed environmental concerns in organizations making it less likely that the organizations will violate environmental laws. This article discusses some of the new policy directions being pursued in the United States with particular emphasis on programs being developed in the State of Minnesota that are designed to stimulate voluntary compliance.

### **1 BACKGROUND**

Environmental improvement is driven by several different mechanisms including personal values, economic incentives, statutory requirements, the way laws are administered and enforcement. Figure 1, below, is a graphic illustration of these drivers. It also lists several types of programs or issues that are important aspects of each driver. Over the last two decades, most of governments' efforts have concentrated on statutory and administrative requirements coupled with enforcement programs to drive environmental improvement. These drivers have most often been used to impose change on sometimes unwilling or at least reluctant regulated entities. In the absence of a widely held environmental ethic or clearly perceived economic motivations for environmental improvement, these imposed requirements were the most effect way to assure that environmental improvement would occur. There is a consensus in the United States that the statutory requirements introduced over the last 25 years together with the efforts of the federal and state governments to enforce these requirements have resulted in significant improvement in environmental quality.

The increasing attention to environmental issues in the United States, sparked by environmental crises, pervasive regulation, prominent enforcement actions and more widespread environmental education, has triggered a growing environmental ethic in the country. These same factors have made it clear to businesses that their economic health may be heavily

**Figure 1. Drivers of Environmental Improvement**

impacted by environmental issues. The result is that new types of programs grounded in personal values and economic self-interest, including voluntary compliance programs, can successfully be employed to achieve important environmental objectives. The experience with recycling programs in the United States which relies on voluntary compliance has demonstrated that a change in personal values can produce dramatic results. In addition, factors such as the increasing cost of achieving marginal environmental improvement, the growing focus on diffuse sources of pollution such as air toxics and non-point water pollution, the rapid expansion of the number and type of regulated facilities, and the limited resources available to government to develop and enforce environmental regulations, suggest the need for greater emphasis on voluntary compliance programs.

Because of these changes, the federal and state governments are redesigning their existing statutory, administrative and enforcement programs to make them more flexible and to build in performance incentives. In addition, these governments are turning to new ways to drive environmental improvement. Many of these new voluntary compliance techniques involve fostering personal responsibility for environmental problems or helping to realign economic incentives in ways that promote environmental improvement. Because they rely on the basic behavioral motivators of values and economic self-interest, these new programs may be more effective in embedding environmental issues in personal and workplace decision making.

Since these new approaches could have significant effects on enforcement programs, it is critical that enforcement officials understand and participate in the development of the new techniques. Perhaps the most significant impact of the efforts to encourage voluntary compliance programs is the ability to focus always limited enforcement resources on poorer performing organizations. With often tens of thousands of facilities subject to environmental requirements specific and general deterrence through enforcement cannot, by itself, assure wide spread compliance. Voluntary compliance programs that preserve scarce enforcement resources, so that those resources can be targeted on the most significant environmental problems and on the worst offenders, will be most successful.

A second important benefit for enforcement officials derived from voluntary compliance programs is greater support for enforcement programs. Enforcement programs that are part of a comprehensive compliance strategy that includes compliance education, technical assistance and other voluntary compliance options are likely to be perceived as fairer than those programs that place little emphasis on voluntary programs. In addition, it is much more difficult for enforcement targets to argue to political leaders and to courts that they have treated unfairly if voluntary compliance programs were available to the organizations. Finally, as voluntary compliance increases in a sector, the businesses in that sector are more likely to support enforcement efforts against laggards because the laggards may be gaining at least a short term economic advantage over the sector leaders by avoiding costs associated with compliance.

When voluntary compliance efforts cause environmental concerns to become embedded in personal decision-making, a third benefit for enforcement officials results. Since imposed changes often result in reluctant compliance, people subject to imposed requirements will frequently look for ways to get around the imposed requirement. On the other hand, people are much more likely to enthusiastically pursue change that is consistent with their personal ethic or with their economic self-interest. Governments will have to continue to establish norms to ensure at least a basic level of protection for the environment and for public health, as well as to deal with people who will not respond to voluntary programs. Still, by focusing some voluntary compliance efforts on altering personal values or enhancing economic motivations for environmental improvement a sociological setting is created where the need for enforcement of some requirements is likely to be significantly lessened and where continuous improvement of environmental outcomes may occur.

The remainder of this article discusses several voluntary compliance programs in the United States focusing particularly on the efforts of the State of Minnesota. In the United States, responsibility for environmental programs is divided between the federal and state governments. Typically, the United States Congress adopts legislation that gives the U.S. Environmental Protection Agency (U.S. EPA) primary responsibility for setting standards to protect the country's air, water and land from pollution. In most cases, Congress authorizes U.S. EPA to delegate to the states the ability to issue permits under the federal laws and to enforce the laws if a state has adequate statutory authority and the resources to administer the program. Although U.S. EPA retains authority to review state programs and to independently initiate enforcement actions, the majority of enforcement in the United States is conducted at the state and local governmental level. In addition to authority delegated from U.S. EPA, states enact their own environmental programs to suit the particular needs of the state. Minnesota has long been a leader among the states in developing innovative environmental programs.

Within Minnesota, the responsibility for environmental programs is shared by the Minnesota Pollution Control Agency (part of the Governor's office) and the Minnesota Attorney General's Office. The Attorney General is an independently elected public official in Minnesota. The Pollution Control Agency is responsible for developing environmental regulations, issuing permits, investigating violations of environmental requirements and initiating administrative enforcement actions. The Attorney General is responsible for investigating criminal violations of environmental laws,

representing the Pollution Control Agency in administrative hearings and initiating civil judicial enforcement actions. The Attorney General's Office has for several years worked closely with the Pollution Control Agency to develop more effective enforcement tools and to develop preventative programs that are designed to minimize the need for enforcement. While some Attorneys General in the United States do environmental policy development work, environmental policy development has been a priority for Minnesota Attorney General Hubert H. Humphrey for nearly a decade. This priority is demonstrated by the fact that Minnesota is the only state that has had a full time Director of Environmental Policy in the Attorney General's Office over the past eight years.

## **2 VOLUNTARY COMPLIANCE PROGRAMS**

### **2.1 Personal responsibility**

Personal values and information are critical drivers of behavior. Recognizing this fact, the Minnesota Attorney General's Office has long focused on educational efforts to shape personal values in order to better address such intractable enforcement problems as drug abuse and sexual violence. Similarly, initiatives to improve environmental education and to increase access to environmental information can enhance personal responsibility for environmental improvement.

#### **2.1.1 Environmental management training**

Most people responsible for environmental compliance in the United States have had little training related to developing and implementing comprehensive environmental management systems. The Dutch government relies heavily upon environmental management systems (referred to as "internal care systems") to achieve their goals for sustainable development. They have identified several elements that should be part of a quality environmental management system. These include:

- A company environmental policy statement.
- A detailed environmental management program.
- Integration of environmental management in normal business operations.
- Internal monitoring of environmental activities and releases.
- Internal information and training.
- Internal and external environmental reporting.
- Periodic environmental auditing.

These elements are similar to the International Standards Organization draft Environmental Management Systems Standard (ISO 14001).

Based on a belief that comprehensive environmental management systems could significantly increase compliance, the Minnesota Attorney General's Office, in conjunction with three non-profit training organizations, will be conducting two environmental management training programs over the next two years. One program will focus on larger businesses, while the other will use different techniques to reach small and medium-sized businesses. The programs are funded by a \$197,000 grant from the U.S. Environmental Protection Agency, program fees and in-kind donations of time from the Attorney General's Office and an environmental consulting firm.

### 2.1.2 Eco-Sense curricula

Early educational opportunities can have a major impact on the development of environmental values. These values, in turn, are likely to affect voluntary compliance as young people grow to assume decision-making positions. The "Eco-Sense" series of educational curricula was developed by the Minnesota Attorney General's Office in conjunction with a non-profit education organization to help students integrate environmental and economics issues into their day-to-day decision-making. Three curriculum guides have been developed to date:

- "Eco-Sense" designed for 12 to 17 year-old students.
- "Eco-Sense: It's Elementary" designed for 7 to 11 year-old students.
- "Eco-Sense: Know Tomorrow," a curriculum focused on sustainable development designed for 14 to 17 year-old students.

Several hundred teachers in Minnesota have been training to use the curriculum. The program costs about \$40,000 per year to operate. The money is raised through foundation grants and corporate donations made to the non-profit educational organization.

Focusing on values, information and personal responsibility to increase voluntary compliance with environmental regulation will not always result in behavioral change in the short term. However, embedding environmental values in personal decision-making may be the most effective way of minimizing environmental enforcement problems over the long run.

## 2.2 Economic incentives

Economic self-interest is also a powerful motivator for change. In the past, many people assumed that economic interests and environmental interests were polar opposites.<sup>1</sup> However, recent experience demonstrates that economic and environmental interests are increasingly compatible. For example, one study on reduction of pollution through changes in production processes found the annual savings per dollar spent on reduction of polluting chemicals in industrial processes averaged \$3.49 for the 27 activities studied.<sup>2</sup> Research also indicates that companies that take steps to minimize resource input and pollution output are likely to be more competitive.<sup>3</sup>

### 2.2.1 Economic incentives for adopting comprehensive environmental management systems

Organizations may achieve economic benefits by adopting comprehensive environmental management systems; these benefits result from risk reduction achieved by better management techniques. The risks that may be mitigated through improved management systems include:

- Government enforcement and noncompliance penalties.
- Tort liability.
- Workers compensation claims.
- Superfund and other cleanup liability.
- Adverse publicity from spills or other environmental problems.

Although the risk reductions and competitive advantages associated with comprehensive environmental management systems should provide businesses with strong internal incentives to adopt these practices, there are a number of factors including short-term costs, lack of training and organizational culture that have kept many companies from moving in this direction. To overcome these roadblocks, the Minnesota Attorney General's Office is exploring whether external incentives

may create the momentum that would lead to widespread adoption of these systems. One of these external incentives is a penalty mitigation program such as the one discussed in section 2.5. Another external incentive may be increased access to capital and insurance

Lenders, insurers, and financiers can play an important role in encouraging companies to adopt environmental management systems, thereby reducing risks relevant to their lending, insurance and financing decisions. Specific recognition of these lowered risks in the form of expanded availability of loans or insurance, lower rates for loans or insurance, or increased investment would certainly be a powerful incentive for companies to institute these systems and practices. For this to happen, there must be clear criteria for identifying what constitutes a quality environmental management system. The ISO 14001 standards could conceivably serve this purpose. There also must be a clear understanding that these systems can substantially lower risk and increase competitiveness. Along the same lines, businesses will have to know the kinds of practices that will qualify them for better access to loans and insurance, and increase their attractiveness to the financial community.

Government can play a key role in facilitating the criteria development process. Because better access to capital and insurance could be a powerful incentive to adopt and implement environmental management systems, the Minnesota Attorney General's Office is now working with NGO, business, insurance, banking and investment community representatives to identify specific steps that could be taken to develop new financial incentives for implementing comprehensive environmental management systems.

### 2.3 Statutory framework

The structure of environmental requirements can be a major factor influencing the effectiveness of voluntary compliance efforts. Although environmental conditions have improved dramatically in the United States under the current statutory framework we have learned that this framework can also create barriers to further environmental improvement.<sup>4</sup> Two key barriers to voluntary compliance are technology-based standards and a lack of stable long-term environmental goals. Although technology-based standards may be needed in some cases, these standards frequently stifle innovation and lead to higher compliance costs.<sup>5</sup> The lack of stable long-term environmental goals create uncertainty which is difficult for many businesses to deal with in their normal planning process, thus creating additional resistance to meeting environmental requirements. Regulatory reform efforts that encourage innovation, set out clearer long-term environmental goals and provide reasonable planning horizons for affected organizations are more likely to stimulate voluntary compliance than some of the current approaches.

#### 2.3.1 President's council on sustainable development

In 1994 President Bill Clinton established a multi-stakeholder council to recommend ways for the United States to move toward a more environmentally-sustainable economy. The President's Council on Sustainable Development conducted most of its work in multi-stakeholder task forces. The Minnesota Attorney General's Office participated in the Eco-Efficiency Task Force of the President's Council on Sustainable Development. This task force developed recommendations for reform of the regulatory process which are designed to encourage innovation and progress toward sustainable development. These recommendations include:

- Ambitious long-term environmental performance goals, strategically and collaboratively set, on an industry, facility, agency, community or geographic basis.

- Interim quantitative milestones which ensure that participating entities continuously improve environmental performance and make progress toward long-term performance goals.
- Increased operational flexibility that maximizes innovation and cost-effectiveness in exchange for achieving improved environmental performance.
- Use of incentives to increase operational flexibility, decrease participation costs and encourage continuous improvement in environmental performance.
- Use of information mechanisms to measure and demonstrate that progress toward goals is occurring and to provide participants with information that facilitates environmental decision-making while sufficiently protecting proprietary information.
- Enhanced public involvement in setting goals for sustainability and reviewing progress toward goals at the local, regional, state and national levels.
- A life-cycle perspective that encourages participating entities to establish pollution prevention and product stewardship as standard business practices.
- A multi-media approach that encourages participating entities to manage environmental responsibilities in a "whole-facility" or "whole-ecosystem" fashion.

The federal and state governments are now examining what they can do to create more efficient and effective regulatory systems based on many of the ideas identified above.

#### 2.4 Administering environmental laws

The manner in which environmental laws are administered can also stimulate voluntary compliance (and beyond compliance) efforts. Because flexibility in changing production processes is very valuable to many companies, they are often willing to commit to voluntary reductions not required by law in return for more flexibility in the permitting process. Providing technical assistance to organizations to help them make desired changes can also help spur voluntary compliance. By providing incentives and assistance to organizations that take significant steps to improve their environmental performance, a better working relationship develops between the regulated organization and government. This more "trusting" relationship is likely to further encourage voluntary compliance.

##### 2.4.1 Project XL

One of the priorities of the Clinton Administration is increasing the efficiency and effectiveness of the federal administrative agencies. Vice President Al Gore was appointed to lead this effort which was called the "National Performance Review." As part of the National Performance Review, the Clinton Administration issued a report in early 1995 entitled "Reinventing Environmental Regulations." One of the key recommendations in the report was the creation of alternative performance-based strategies. "Project XL" is a critical component of the reinvention effort. In partnership with the states, the U.S. EPA is providing a limited number of responsible companies the opportunity to demonstrate excellence and leadership. They will be given the flexibility to replace the requirements of the current system at specific facilities with an alternative strategy developed by the company if certain conditions are met:

- The alternative strategy must produce environmental performance superior to that which would be achieved by full compliance with current laws and regulations.

- The alternative strategies must be “transparent” so that citizens can examine assumptions and track progress toward meeting promised results.
- The alternative strategy must not create worker safety or Environmental justice problems.
- The alternative strategy must enjoy the support of the community surrounding the facility.
- The alternative strategy must be enforceable.

Minnesota is the only state authorized by the U.S. Environmental Protection Agency to undertake Project XL pilot projects. XL documents will take the place of individual permits that participating facilities might otherwise hold. As part of its XL program, the Minnesota Pollution Control Agency developed the “Environmental Regulatory Innovations Act”<sup>6</sup> which is currently pending before the Minnesota legislature. The Act will provide a statutory base for the administrative changes that are part of Project XL.

Under the Act, the Minnesota Pollution Control Agency could issue an XL permit if:

The permit will facilitate pollution prevention and source reduction activities by the facility and result in significantly more overall pollution reduction from the facility, its customers, or suppliers than would otherwise be required by applicable laws, without increasing any negative impact on the environment, the local community, or worker health and safety.

- the pollution prevention, source reduction, or other pollution reduction goals are verifiable.
- The pollution limits contained in the permit are verifiable and enforceable.
- The stakeholders have been involved through a decision-making process that seeks consensus in the design of the permit and will have the opportunity for continued involvement in the implementation and evaluation of it.
- The permittee agrees to make available information that it gives the agency about the XL project, except confidential information to the stakeholder group in a format that is easily understood.
- The permittee agrees to provide an assessment of the success of the project in reducing the time and money spent at the facility on paperwork and other administrative tasks that do not directly benefit the environment.
- The permittee, the pollution control agency, and other state and local agencies are likely to expend less time and resources over the long term to administer the Minnesota XL permit than other types of permits.
- The project is consistent with the federal government’s Project XL guidance and any federal legislation governing the Project XL program.

Minnesota’s XL program is based on a project that the Minnesota Pollution Control Agency (MPCA) and 3M Corporation undertook in 1992 and 1993 which resulted in an innovative air quality permit. The permit provided precedent setting operational flexibility by preauthorizing facility modifications as long as air emissions remain below a cap set at 50 percent less than was actually emitted in 1991. Not only has significant environmental benefit resulted from this permit, but 3M and the Agency’s costs have been reduced. Between March 1993 and January 1995, the 3M Corporation made 21 changes that would have required permit modifications. Avoiding the permit modification process resulted in two important benefits for the company. The company saved 1,530 hours that would have been spent on permit applications and other administrative time, and it was

able to get its products to market more quickly. The Agency also saved an estimated 700 hours of staff time that would have been expended in preparing and processing seven major permit modifications.

#### 2.4.2 Technical assistance

Changes in products or processes can make compliance with environmental requirements much easier by preventing pollution problems from arising. Governments in the United States have been a catalyst for pollution prevention activities for over a decade through technical assistance programs. In addition, providing concise information about environmental requirements and how to meet those requirements can increase compliance rates.

Recently, U.S. EPA has established several small business compliance assistance centers to focus on businesses such as printing, metal-finishing and auto service stations where compliance costs are high and noncompliance rates are significant. These new centers will:

- Assist state and local agencies and trade associations to develop "plain English" guides to regulations.
- Identify low-cost strategies to achieve compliance.
- Develop ways to consolidate reporting and cut paperwork for client industries.

The long term plan is to establish one national compliance center for each small business sector, which would work with the trade association and state programs providing technical assistance for the particular industry.<sup>7</sup>

##### 2.4.2.1 Minnesota Technical Assistance Program

The Minnesota Technical Assistance Program (MnTAP) was established over 10 years ago under Minnesota's Office of Environmental Assistance and is located at the University of Minnesota. The Program's nonregulatory technical assistance helps Minnesota's manufacturing and service industries protect the environment by providing practical alternatives for properly managing waste and preventing pollution of land, air and water. Specific services available include telephone and on-site assistance, an intern program for business, an information clearinghouse and training/workshops.

###### 2.4.2.1.1 Telephone assistance

Each quarter Minnesota Technical Assistance Program receives approximately 300 telephone inquiries, about 10 percent of them from environmental consulting firms. A variety of large and small Minnesota industries, from metal fabricating and finishing to dry cleaners and printers, have requested telephone assistance in the following areas:

- Less-toxic and hazardous raw materials to use in manufacturing operations.
- Process or equipment redesign or upgrading to prevent pollution.
- Environmentally acceptable options for transporting, disposing, or recycling industrial waste.
- Waste management and regulatory compliance.<sup>8</sup>

###### 2.4.2.1.2 Site visits

Generally, a site visit has the following components:

- A meeting with the company representative to clarify objectives of the visit.
- A plant walk-through.
- A follow-up meeting to restate objectives, summarize what was observed, provide readily available information and identify next steps.

The site visit is always followed by a letter and additional printed materials from the technical assistance staff person laying out waste reduction and waste management considerations. During 1994 and 1995, the Program staff conducted 273 site visits.<sup>9</sup> Figure 2 summarizes the number of site visits by type of business.

**Figure 2. Summary of Site Visits by Type of Business, 1994-1995**

Type of Business	Number of Site Visits
Food manufacturing	20
Printing & publishing	17
Chemical manufacturing	15
Rubber & plastic products manufacturing	19
Primary metal industries	16
Fabricated metal products manufacturing	42
Industrial & commercial machinery & computer equipment mfg.	31
Electronic & electric equipment manufacturing	14
Transportation equipment mfg.	17
Educational services	10
Other businesses	72

#### 2.4.2.1.3 Student intern program

The Minnesota Technical Assistance Program intern program has a primary objective of placing students in industrial facilities to implement pollution prevention measures as technical solutions to regulatory and industrial needs.

Typical steps in an intern project include assessment, information gathering, identification of opportunities, technical and economic feasibility, and implementation, where time allows. Students produce a report that contains recommendations for pollution prevention implementation for the company. Students present project results to the company and the staff of the Minnesota Technical Assistance Program. The staff then document results and provide needed additional assistance.

During 1994 and 1995, eight interns were placed, bringing the total since the program began in 1985 to 60. Waste and emissions reduced since 1985 on an annual basis total more than 1,341,000 pounds (plus 10 million gallons of water) with a cost savings of approximately \$654,000.<sup>10</sup>

## 2.5 Enforcement

Enforcement programs can also be designed in ways that promote voluntary compliance. In the United States, enforcement officials traditionally have had broad discretion to decide not to pursue an enforcement action if there are substantial mitigating factors. In the environmental field,

self-reporting of violations and prompt correction are important factors in deciding whether an enforcement action should be pursued. These same factors are also important in determine whether a civil or criminal enforcement action should be initiated and what, if any penalty should be imposed.

Voluntary compliance can be stimulated by clearly communicating to regulated organizations that they will be treated more favorably if they seek-out violations within their operations, and promptly report and correct those violations. Several programs in the United States follow this approach. These include the U.S. Environmental Protection Agency's December 1995 policy on "Incentives for Self-Policing"<sup>11</sup> and the United States Sentencing Commission proposed guidelines for sentencing corporate officials convicted of federal environmental crimes.

#### 2.5.1 Environmental improvement pilot program

The Minnesota Environmental Improvement Act of 1995<sup>12</sup> establishes a four-year pilot project to encourage environmental auditing. The Act supports auditing efforts by waiving penalties in most cases where companies and governmental units audit their facilities, report problems and commit to prompt correction of the problems they identify.

As an alternative to an audit, the Act authorizes businesses and governmental units to use a new self-evaluation checklist if they do not have the expertise to conduct internal audits or cannot afford the cost of an external audit. Finally, the Act allows participating companies and governmental units to be recognized for their efforts by authorizing their facilities to display a "green star" emblem that indicates the facility is in compliance with environmental requirements.

The Act should benefit businesses and governmental units by providing better information about their operations, encouraging them to learn more about the environmental requirements that apply to their facilities, and by providing increased certainty about how they will be treated in the enforcement process. It will benefit the environment by assuring that many more facilities meet or exceed the state's environmental expectations. In the first six months, eight audits covering 18 facilities have been submitted to the Minnesota Pollution Control Agency. The program is run by the equivalent of two full time staff.

### 3 CONCLUSION

Laws and regulations that ensure a minimum level of environmental and public health protection and firm enforcement of these norms remain the core of effective environmental programs in the United States. These efforts can be significantly enhanced by creating additional incentives for environmental improvement. By aligning internal company incentives (personal values, efficiency, liability reduction, competitiveness) with government incentives (penalty mitigation, permit flexibility and regulatory reform) together with external incentives (increased access to capital and insurance as well as increased attractiveness to the financial market) everyone wins. The results of these efforts should be decreased risks and costs, substantially-increased voluntary compliance, an enhanced ability for enforcement organizations to target their limited resources on the worst problems and offenders, and most important, improved environmental quality.

### ENDNOTE AND REFERENCES

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7. *Reinventing Environmental Regulation*, p. 31.
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## **ENCOURAGING VOLUNTARY COMPLIANCE WITHOUT COMPROMISING ENFORCEMENT: EPA'S 1995 AUDITING POLICY**

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### **SUMMARY**

Environmental auditing has expanded rapidly in the United States over the past decade, in response to the complex and multiplying requirements of environmental law. The US Environmental Protection Agency has encouraged this trend by helping to define the concept of environmental auditing through policy and technical assistance, and through a strong enforcement program that discourages noncompliance. In December of 1995, the EPA announced for the first time that it would systematically reduce civil penalties and corporate liability for criminal prosecution for companies that voluntarily audit, disclose, and correct violations. This article examines the evolution in EPA's approach to environmental auditing, explains the criteria that shaped the new policy, and reviews its prospects for success.

### **1 THE FIRST STEP: EPA'S 1986 POLICY**

#### **1.1 EPA Policy Statement**

By the mid 1980's, the accumulation of new regulatory standards and the federal government's commitment to their enforcement had made environmental auditing a practical necessity for many businesses. The EPA sought to encourage this trend with a 1986 policy statement that provided a common sense definition of auditing (ATTACHMENT 1), and recognized that auditing should remain a voluntary activity, to provide individual companies the flexibility to design their own systems for self-policing.

EPA also sought to reassure nervous corporate counsel, anxious to protect their clients' privacy, that environmental audits would not generally be the subject of routine government inspections.

US environmental law provides EPA inspectors with broad authority to request any evidence regarding a potential violation, including materials contained in an audit. This material may be requested prior to an investigation or during the course of the inspection request. While making clear that EPA would not request audit reports as a routine matter, the Agency reserved the right to request such documents (or portions thereof) for specific cause, e.g, where the information might be useful in determining whether a violation was intentional.

While auditing was identified as one factor the Agency might consider in assessing a penalty for violations, the policy declined to make specific promises to reduce inspections or enforcement in exchange for audits:

EPA will not promise to forgo inspections, reduce enforcement responses, or offer other such incentives in exchange for implementation of environmental auditing or other sound environmental management practices.

The Agency did indicate that it would take into account, on a case-by-case basis, the "honest and genuine efforts of regulated entities to avoid and promptly correct violations..." in determining the appropriate enforcement response.

## 1.2 Agency Practice Under 1986 Policy

Following issuance of the policy, EPA invested in numerous reports, case studies, bibliographic references, and training materials, designed to help guide the fledgling environmental auditing industry. EPA's internal surveys confirm that the Agency has kept its promise not to routinely request audit reports in inspections. The Agency also typically adjusted penalties downward for violations voluntarily discovered and reported by the regulated industry, although conflicting rules in different media programs made it difficult to establish a consistent and predictable pattern.

## 2 ENVIRONMENTAL AUDITING AFTER 1986

### 2.1 Importance of Deterrence to Self-Policing

The 1986 policy reflected three related principles that are fundamental to EPA's environmental enforcement program:

- 1) Frequent and thorough inspections and stiff penalties for noncompliance send a strong message of deterrence to would be violators;
- 2) Enforcement agencies should have the discretion to adjust penalties for good faith efforts to comply, but any limitations on that discretion (e.g., promises to reduce penalties for companies that audit) should be avoided because they undermine deterrence;
- 3) Environmental audits are their own reward, because they help companies to find and correct violations before they are brought to the attention of enforcers, as well as reduce potential liability for damage to surrounding communities.

### 2.2 Growth in Environmental Auditing

The explosion in environmental auditing since publication of the 1986 policy offers powerful testimony to the truth of these arguments. So does evidence from the regulated industry about the reasons for this growth.

Surveys of the private sector over the past two years have demonstrated that environmental auditing is now widely accepted as good business practice, at least by companies that are coping with significant regulatory requirements. A 1994 Price Waterhouse survey of major corporations found that 75% of respondents had already established environmental auditing programs, up from 40% in 1992. These findings were consistent with a 1994 survey by the Investor Responsibility Research Center (IRRC), which found that 85% of respondents had established such programs, with most conducting audits at U.S. facilities at least once every two years. A 1995 follow-up survey by Price-Waterhouse found that over 90% of respondents in heavily regulated sectors like petroleum refining and chemical manufacturing audited on a regular basis.

Why such high levels of participation? Not surprisingly, the same surveys report that environmental self-policing is driven by enlightened self-interest, as companies seek to reduce their exposure to fines and environmental damages and improve their efficiency. For example, over 96% of the respondents to the Price-Waterhouse survey said that one of their most important

reasons for auditing was the need to uncover violations before they were identified by government inspectors. (ATTACHMENT 2). Interestingly, while companies responding to the IRRC survey reported auditing 75% of their U.S. facilities over the past two years, only half of their foreign plants had been audited within that time. While there may be a number of explanations, stringent regulatory standards and their enforcement have undoubtedly created an incentive for industry self-policing in the United States.

### **3 EPA REEXAMINES ITS AUDITING POLICY**

#### **3.1 Regulated Industries Raise Concerns About Liability**

As environmental auditing became more widespread, however, corporations began raising questions about their potential liability for violations uncovered during these self-evaluations. While fear of enforcement was identified as a major incentive to audit, the 1995 Arthur Andersen survey cited concern over potential exposure to fines and third-party claims for damage as a major impediment to the expansion of auditing programs.

At the same time, as inspection resources failed to keep up with the growth in new regulations, government agencies gained an even greater appreciation of the importance of voluntary auditing to compliance. By one estimate, at least 700,000 facilities are subject to one or more federal environmental laws, while the federal government and states together conduct fewer than 100,000 inspections every year. As discussed above, while different enforcement policies offered discretion to offset penalties by varying amounts for violations disclosed and corrected, these policies were not consistent and not perceived as offering a substantial incentive.

In July of 1994, EPA began a public reexamination of its auditing policy, to determine whether it should offer additional incentives to encourage companies to conduct environmental audits. The key issue was whether it was possible to reduce the risk of enforcement for companies that audited and corrected violations, without compromising the kind of deterrence-based enforcement that contributed to the growth of auditing in the first place.

#### **3.2 Regulated Industry has Proposed Privilege and Amnesty for Environmental Audits**

The Agency began by examining two concepts advanced by lawyers representing regulated industry.

The first proposed establishing a statutory privilege that would shield environmental audit documents from discovery by government agencies or other third parties, so long as any violations found were ultimately corrected. "Discovery" in this context refers to requests for evidence or testimony that occurs during the inspection process referred to above, as well as legal motions by either party to compel the disclosure of such material once the case is taken to court. Discovery rules under US law are quite broad, so long as the requests are relevant to the case, and subject to only a few narrow exclusions (such as confidential communications between a lawyer and his client).

The second alternative is to grant immunity from civil penalties or criminal prosecution for any violations found through audits which were disclosed to government agencies and corrected. At present, fifteen states have enacted either privilege or immunity laws, or some combination of the two approaches.

### 3.3 EPA Rejects Privilege

After careful consideration, the EPA has decided to reject the concept of a privilege protecting environmental audits from discovery for several reasons. Among the most important:

- The Agency is concerned about the effect a privilege might have on its ability to obtain evidence of wrongdoing, or assure that violations have been corrected. American law has traditionally placed a high value on fair access to the facts, best reflected in the Supreme Court's finding that, "*the public...has a right to every man's evidence.*" (CITATION)
- There is little to suggest that a privilege is needed or would encourage an increase in auditing, at least in those cases where the government is willing to offer limited amnesty to encourage disclosure. In practice, audits are rarely seized by government agents, while industry respondents in the Price-Waterhouse survey identified concerns about confidentiality as one of the least important barriers to auditing.

## 4 EPA OFFERS LIMITED AMNESTY TO ENCOURAGE AUDITS

### 4.1 Finding the Balance

While rejecting evidentiary privileges, the Agency came to appreciate the value that a limited penalty amnesty program might have in encouraging voluntary self-policing. Unconditional amnesty, which might excuse irresponsible behavior which caused real harm, was rejected outright as undermining the value of deterrence in preventing such misconduct. As an alternative, EPA worked with state agencies, the regulated industry, and public interest groups to develop a balanced approach that reduces civil penalties and the threat of criminal liability for companies that audit, but with conditions and exceptions to protect the public and provide a continued incentive for companies to prevent violations before they occur.

This compromise is reflected in EPA's new policy, announced on December 22 of 1995. The policy is best explained by examining:

- how the violation must be discovered and disclosed;
- what the company must do after the violation is reported to EPA;
- the specific benefits EPA is offering for those who meet the policy's conditions;  
and
- the circumstances in which these benefits are not available.

### 4.2 Discovery and Disclosure

Discovery of the violation must be voluntary, that is it must not be detected through monitoring equipment or sampling protocols that are required in the company's permit. It should be independent, e.g., before the company has been notified of the problem through an inspection or by a third party. To receive full credit from EPA, the discovery should arise from either an environmental audit, or a compliance management program that demonstrates due diligence. Finally, once identified, disclosure of the violation must be prompt, generally within 10 days of discovery.

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These conditions make clear that the incentives offered under the audit policy are for companies that take the initiative, without requirements or prompting from the government, to assess their compliance status. Disclosure of the violation is important, because it allows EPA to determine that the problem has been corrected and not allowed to linger.

An effective compliance program requires not only periodic auditing, but a comprehensive system that engages both managers and employees in the day-to-day task of both preventing and responding to noncompliance. The Agency's policy recognizes the value of both approaches. Environmental audits are defined according to the 1986 policy as encompassing a periodic, etc.

To receive credit for violations found through a compliance management program, a company must be able to demonstrate due diligence according to criteria for corporate compliance adapted from the 1991 Sentencing Guidelines. (ATTACHMENT 3). These criteria are designed to be flexible and consistent with emerging ISO 140001 standards for environmental management systems, while providing more specific guidance for compliance than are contained in ISO.

#### 4.3 Correction and Prevention

Once the company has reported the violation it must, of course, agree to return to compliance. EPA may require a written agreement binding the company to keep its commitment, and to take specified actions to prevent the violation from recurring. The company is expected to cooperate with the Agency in supplying whatever documentation is needed to determine that the problem has been corrected. Any compliance agreements reached under the policy will be made public, to avoid any appearance of collusion between EPA and the regulated industry.

#### 4.4 Incentives for Self-Correction

A company with an aggressive auditing or compliance management program to identify, report, and correct violations can virtually eliminate its potential for significant civil or criminal penalties. These incentives are particularly valuable under US environmental law, which establishes stringent sanctions for noncompliance.

In general, a company or individual that knowingly violates the law risks not only monetary penalties, but incarceration for those responsible. For purposes of establishing criminal liability, "knowledge" means awareness that the act was committed, not necessarily that it was illegal. Under the Clean Water and Clean Air Acts, even negligence may be charged as a criminal misdemeanor. These seemingly strict standards are consistent with liability for other types of "general welfare" offenses, and reflect the common-law maxim that "ignorance of the law is no excuse." In practice, criminal prosecutions are reserved for the most serious types of misconduct, but there is no question that the potential penalties — particularly the prospect of jail time for corporate officials — has caught the attention of senior management and their counsel.

Where conditions of the audit policy are met, however, EPA will not recommend criminal prosecution of the corporation. Neither will corporate managers be charged with the illegal acts of their employees, unless they were consciously involved in, or wilfully blind to, the violation. In other words, companies may audit, disclose and correct compliance problems without fearing that these actions may expose them to criminal liability. Not surprisingly, EPA's new policy reflects common sense practice, as the Agency's criminal program has never recommended criminal prosecution in such circumstances. Putting this practice in writing, however, may help to reassure the most risk-averse corporations that their good faith efforts will be rewarded, not punished.

Corporations are also strictly liable for environmental violations, without regard to whether the violation is knowing or negligent. Strict liability allocates the cost of correcting the problem to responsible parties, without regard to fault. Federal environmental law also promotes deterrence through civil penalties that reflect both the "gravity" of the offense, and any economic benefit gained

through noncompliance. Gravity-based penalties can reach as high as \$25,000 per violation per day under some federal environmental laws; long-term noncompliance can, and has, cost companies tens of millions of dollars in civil fines.

EPA has agreed to waive these gravity-based penalties altogether where companies audit, disclose and correct violations. In the 1995 Price-Waterhouse survey, two-thirds of corporate respondents said they would expand the scope of their auditing programs in exchange for reduced penalties. The Agency's policy offers this incentive in the hope that it will improve the extent and quality of corporate self-policing.

#### 4.5 Maintaining Deterrence

While reducing the potential for criminal and civil penalties to encourage auditing, EPA wanted to maintain the deterrent effect of a strong enforcement program, which gave birth to the environmental auditing movement in the first place. The conditions for discovery, disclosure, and correction described above are meant to limit the benefits of the policy to good actors. But the Agency also believes that whether or not they audit, corporations ought to remain liable for certain kinds of behavior and exclude the following from the terms of the policy:

- Repeat Violations, where either the same violation has occurred at the same facility within the past three years, or the corporation has demonstrated a pattern of noncompliance over the past five years. Audits should be designed to prevent violations, not to license their repeated occurrence.
- Violations which Result in Serious Harm or Imminent and Substantial Endangerment; The corporation should remain liable not only for putting its neighbors at such risk, but because such events signal a serious failure in its corporate self-policing program.
- Significant Economic Benefit, where a company has gained a competitive advantage over its competitors by delaying its investment in compliance. Several trade associations, including the Chemical Manufacturers Association, have recognized the importance of retaining some ability to recover economic benefit even for violations discovered through auditing, although the CMA does not agree with EPA's definition of economic benefit;
- Individual Criminal Conduct, as auditing should not shield individuals from their personal responsibility for knowing violations of the law;
- Violations of a Compliance Order are excluded. Specific orders to correct violations are generally treated as contractual agreements between EPA and the regulated agency, and companies would have little incentive to meet their commitments if the failure to do so carried no penalty.

EPA has retained its discretion to penalize the worst types of noncompliance, so that auditing remains focused primarily on preventing violations, rather than providing an excuse for misconduct.

## 5 FROM THEORY TO PRACTICE

While it is too early to determine whether the policy will achieve its goals, preliminary signs are encouraging<sup>1</sup>. Disclosures have increased as both the Agency and the regulated community learn that at least some compliance problems can be resolved more quickly without adversarial,

expensive, and time consuming enforcement actions. State environmental agencies, which retain substantial responsibility for environmental enforcement under the US federal system, have begun to adapt the policy for use in their own compliance incentive programs.

Further expansion of environmental auditing, which has become standard business practice for many US companies, may depend on factors beyond changes in EPA's penalty policy. As discussed above, industry's own surveys show that a significant enforcement presence, through frequent inspections, for example, provide an obvious motivation for self-auditing. What happens to this incentive if budget limitations force a cutback in inspections? EPA is exploring whether independent third-party audits, subject to stringent standards, can supplement scarce inspection resources. The Agency is also working through trade associations and state programs to simplify rules and provide direct assistance for the many small businesses that will never be able to audit on a regular basis.

Whether or not it substantially expands auditing, EPA's new policy offers fair play for those who take the initiative to correct violations and stay in compliance. And by helping to distinguish responsible companies from bad actors, it should preserve a solid foundation for a strong and credible enforcement program.

#### **ENDNOTE**

1. Under the new audit policy, 105 companies disclosed violations at more that 350 facilities. Of these disclosures, violations were settled against 39 companies and 47 facilities. Most cases settled without penalty, although some paid economic benefit.

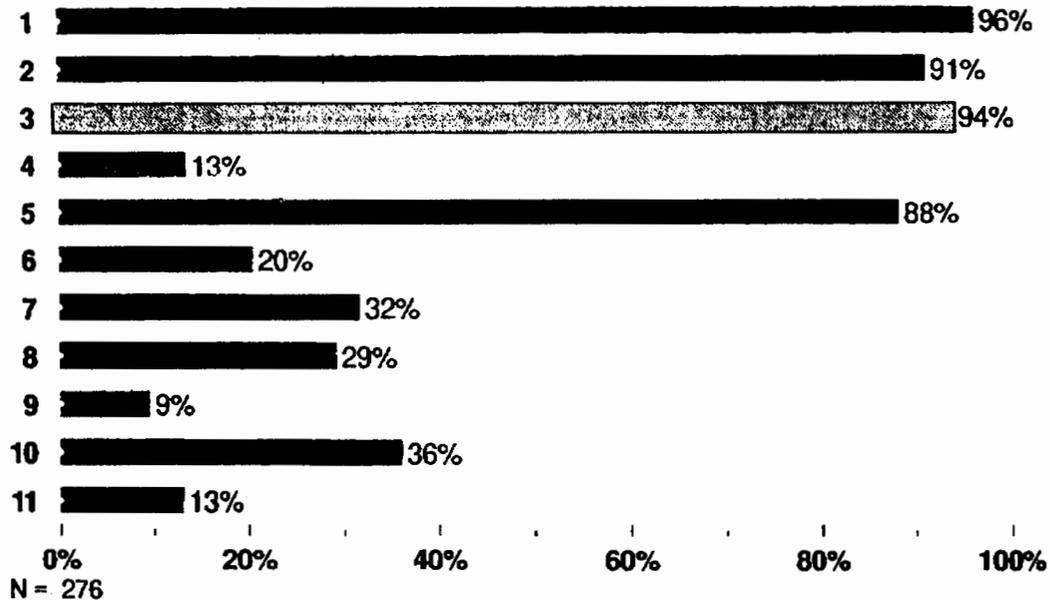
**Attachment 1. The voluntary Environmental Audit Survey of U.S. Business**

**REASONS WHY COMPANIES AUDIT CAN BE REFERENCED WITH THE FOLLOWING CODES:**

1. Problems can be identified internally and corrected before they are discovered by an agency inspection.
2. Assurance can be provided to management that control systems are functioning.
3. To improve the company's overall environmental program and make it proactive.
4. It is a requirement of a permit, consent orders, etc.
5. To decrease the company's operating and financial risks.
6. Auditing program was instituted upon the recommendation of counsel.
7. The proposed "Sentencing Guidelines" state that enforcement actions might be more lenient if an effective audit program is in place.
8. The U.S. DOJ " Factors Document states that criminal enforcement might be averted if an effective audit program is in place.
9. In response to the issuance of the 1986 EPA Policy Statement.
10. To meet requirements of special due diligence audits required reduced risk during real property transactions.
11. Other.

Attachment 2. Reasons why Companies Audit\*

## Reasons Why Companies Audit Percentage for Companies That Audit



In terms of importance, the most frequently cited reason

Note:

**Reason #1** "Problems can be identified internally and corrected before they are discovered by an agency inspection" was the most frequently cited reason why companies audit.

**Reason #3** "To improve the company's overall environmental program and make it proactive" was the most frequently cited "Primary" reason for auditing.

\* From "The Voluntary environmental Audit Survey of U.S. Business" Price Waterhouse (1995)

**Attachment 3. Due diligence**

**"DUE DILIGENCE" IS DEFINED IN EPA AUDIT POLICY AS FOLLOWS:**

"Due Diligence" encompasses the regulated entity's systematic efforts, appropriate to the size and nature of its business, to prevent, detect, and correct violations through all of the following:

1. Compliance policies, standards and procedures that identify how employees and agents are to meet the requirements of laws, regulations, permits and other sources of authority for environmental requirements.
2. Assignment of overall responsibility for overseeing compliance with policies, standards, and procedures, and assignment of specific responsibility for assuring compliance at each facility or operation.
3. Mechanisms for systematically assuring that compliance policies, standards, and procedures are being carried out, including monitoring and auditing systems reasonably designed to detect and correct violations, periodic evaluation of the overall performance of the compliance management system, and a means for employees or agents to report violations of environmental requirements without fear of retaliation.
4. Efforts to communicate effectively the regulated entity's standards and procedures to all employees and other agents.
5. Appropriate incentives to managers and employees to perform in accordance with the compliance policies, standards and procedures, including consistent enforcement through appropriate disciplinary mechanisms.
6. Procedures for the prompt and appropriate correction of any violations, and any necessary modifications to the regulated entity's program to prevent future violations.

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## **DUTCH INDUSTRIAL TARGET GROUP APPROACH: A NATIONAL ENFORCEMENT STUDY ON THE VOLUNTARY ENVIRONMENTAL AGREEMENT FOR THE WOOD PRESERVATION INDUSTRY**

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### **SUMMARY**

In the Netherlands discussions between government and industry are increasingly leading to agreements about the reduction of the environmental effects of the industrial activities. These agreements are set out in covenants. Some people question the effect of such covenants. Aren't these covenants by definition too voluntary? Isn't it much better to incorporate the agreements in the environmental license, so that they become legally enforceable? This report describes an enforcement study made at wood preservation companies by the Inspectorate for the Environment of the Ministry of Housing, Spatial Planning and the Environment at the end of 1994. These companies impregnate soft woods with chemicals to protect them against fungal attack and rot. This branch of industry was one of the first with which the government reached an environmental covenant. In 1992 the agreements were set out in an action programme with the wood preservation companies. The main objective of this study was to obtain insight into how the municipalities, the competent authority for these companies, and especially the individual companies, have executed the agreements made in connection with the target group policy.

## **1 INTRODUCTION**

### **1.1 Industry target group policy**

The government cannot solve environmental problems on its own, let alone prevent all new problems arising. Development focused on sustainability is only feasible if government, industry and nongovernmental organizations join together in common cause. One major means of achieving the Dutch environmental objectives as detailed in the National Environmental Policy Plans is the Target Group Policy.<sup>1</sup> Agreements are made with each branch of industry, for example the printing industry, the iron and steel industry, the chemicals industry, the wood preservation industry and filling stations, with regard to achieving reductions in emissions by the years 2000 and 2010 as compared with the reference year 1985. The reductions are specified in integral environmental targets which constitute part of the covenant signed between government and the relevant branch of industry. The environmental tasks for the industry are set down in an action program. For the wood preservation industry they are described in the "Action Program for Environmental Measures by Wood Preservation Companies"<sup>2</sup>.

Although the target group policy as such concerns voluntary agreements, it is desirable that the agreements reached for individual companies be set forth in the environmental license, so that the agreements are enforceable.

What is the role of the Inspectorate for the Environment in the industrial target group policy? On behalf of the Minister of Housing, Spatial Planning and the Environment, the Inspectorate for the Environment monitors and makes sure that the industrial target group complies with the environmental emission reduction targets as specified in the covenant. The Inspectorate does this by carrying out random checks on compliance with the agreements (the execution of these by the companies and the implementation of the measures as required in the environmental licenses).

### 1.2 Reasons for the project

The wood preservation industry is one of the spearheads in the target group industry. The government has in fact been discussing environmental problems with this branch of industry since the mid 1980's. At the beginning of the 1990's an integrated package of environmental regulations were developed, which are detailed in an action program<sup>3</sup>. Additional agreements were made in 1993 with the specific group of companies using creosote oil to preserve wood about the restriction of the emission of creosote oil into the atmosphere. The implementation of the environmental measures was to be carried out in phases. All environmental measures specified in the action program were to have been implemented by mid 1994.

### 1.3 Objectives of the project

Section 1.2 explained that as part of the target group policy agreements have been made to restrict the environmental effects of companies in the wood preservation industry. These agreements are specified in the action program. This article describes how the companies carried out the following agreements cited in the action program:

- Taking measures to protect the soil.
- Decontamination of the soil following earlier pollution.
- Provision of independent inspection of the impregnation installations.
- Restriction of emissions to the atmosphere by using a high boiling-point creosote oil.
- The setting up of a company environmental plan or the development of a company environmental management system.

It was agreed with the authorities issuing the licenses, the municipalities (the Municipal Council), that priority would be given to the incorporation of the environmental measures of the action program in the licenses.

The purpose of the study is:

- To investigate the extent of the implementation of agreements made between the companies and government in accordance with the target group policy.
- To identify bottlenecks, if any, in the agreements made.
- To set up, if necessary, a follow-up program to ensure that any environmental measures not yet implemented will still be complied with.

#### 1.4 Structure and approach to the project

The study was carried out by inspectors of the Inspectorate for the Environment, who inspected the companies with the assistance of a special questionnaire. This questionnaire was discussed beforehand with the parties concerned, including the Association of the Wood Preservation Establishments and the Association of Netherlands Municipalities (VNG). The questionnaire gave particular attention to the following:

- Compliance with the target group agreements (the action program) and relevant existing legislation.
- The situation with regard to the introduction of company environmental management.
- The quality of the current license issued in accordance with the Environmental Management Act in relation to the target group agreements.
- The quality of the supervision by the competent authority, the municipality.

The visit to the company was prepared by examining the dossiers about the company and any other relevant information. The company was informed of the visit in advance. In most cases the company was visited together with the competent authority. The companies were visited in the autumn of 1994. All 36 wood preservation companies operating in the Netherlands that use the impregnation method known as the vacuum pressure method were involved in the study. The study did not extend to other methods of preservation or protection such as dipping or painting the wood.

## 2 THE CHARACTER OF THE WOOD PRESERVATION INDUSTRY

### 2.1 Preservation of wood

Unlike hard wood soft wood is susceptible to fungal attack. Wood will be attacked by fungi when it is in contact with soil and water, and in general under moist conditions, and it will rot. Under these conditions wood can be made to last longer if it is preserved. This can be achieved by painting the wood or impregnating it with chemicals which are poisonous to fungi (fungicides).

The most effective method of impregnating the wood is the vacuum pressure process. In this process the wood is placed in an impregnating tank, which is then evacuated to extract moisture and air. Then the impregnating agent is forced into the wood at elevated pressures.

The impregnating agents most commonly used in the vacuum pressure process are creosote oil or metal salts. Creosote oil consists of polycyclic aromatics (including benzopyrene) and phenols. Superwolmansalt is the most-used metal salt, being a mixture of chromium, arsenic and copper salts. Salts based on copper and chromium and on copper salts, either with or without ammonium salts, are also used on a large scale.

When the wood is impregnated with salts then these must be fixed in the wood. In a fixation process the salts are physically and chemically bonded to the wood. The degree of fixation determines the leaching behavior of the metal salts. Fixation can take place naturally during a number of weeks, but it can be improved and accelerated by a treatment with hot air or steam (steam fixation).

Thirty-six companies belong to the branch of industry which impregnates wood with the vacuum pressure method in the Netherlands. The majority of these companies impregnate the wood with salts. Four companies use creosote oil in the impregnation process. The total amount

of wood impregnated each year is about 290,000 m<sup>3</sup>, of which 45,000 m<sup>3</sup> is impregnated with creosote oil. There are quite a few smaller companies in the industry; together the fifteen smallest companies produce about 10% of the total amount of impregnated wood. The degree of organization in the industry is limited. About half of the companies are members of the trade-association, the Association of Wood Preservation Establishments in the Netherlands. With a few exceptions the larger companies (annual production >10,000 m<sup>3</sup>) are all members of the association. The members of this association together produce 77% of the impregnated wood.

## 2.2 Environmental impact

The nature and the extent of the environmental impact of the wood preservation companies is related to the nature of the impregnating agents used (see paragraph 2.1). Arsenic is a black list<sup>1</sup> substance for the compartments air, water and soil. Chromium is a black list substance for air, and like copper it is also a priority substance.<sup>2</sup> Emissions of copper, chromium and arsenic salts to the compartments soil and water can occur during the production process and during the storage of impregnated wood (leaching by rainwater).

The impregnation process using creosote oil is carried out at a higher temperature (80 °C). As with metal salts, emissions can occur to soil and water. In this process the emission to the atmosphere (and thus also the smell) is of relevance. In The Netherlands the emission of polycyclic aromatics as a result of wood impregnation was estimated to be 320 tons (80% of the total emission of polycyclic aromatics by industry) in 1985. This is why additional agreements were made with these companies to reduce the emission of the compounds to the atmosphere (90% reduction in 1994 compared with the reference year 1985).

Leaching of the impregnation agents can occur during the useful life of impregnated wood, resulting in diffused distribution in the soil. If waste wood is disposed of by uncontrolled combustion, then heavy metals, especially arsenic, can also be spread in the environment via the air. The ash from this wood also has high concentrations of heavy metals, which can also lead to diffuse distribution of these metals in the environment.

## 3 RESULTS

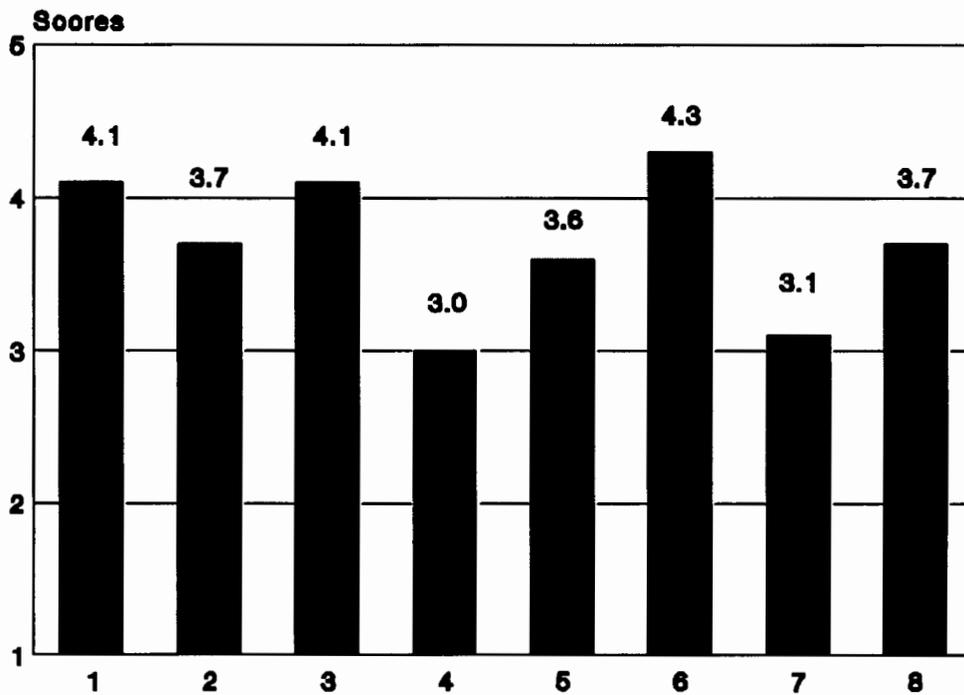
When the Inspectorate for the Environment visited the companies an inspection was made of the extent of the execution of the agreements in the action program. In particular an investigation was made of the extent to which the environmental measures in the action program had been implemented also when these measures had not been included, or only partly included, in the current environmental license. This investigation had the aim of gaining an insight of the extent to which the environmental tasks as agreed on with the trade-association were being executed by the individual companies. In addition to this investigation of the implementation of the environmental measures the study also investigated the agreements on the reduction of emissions of polycyclic aromatics by the creosoting companies and the introduction of environmental management systems.

### 3.1 Execution of the environmental measures from the action program

A selection of the most important measures in the action program was used to draw up a checklist, and this was worked through during the inspection of the company. The questions were clustered in company departments or activities (ten clusters). After the assessment of the results from the individual questions seven clusters were then awarded a final score. Figure 1

shows a summary of the average scores of these clusters, after which the results for the different clusters are discussed in more detail.

**Figure 1. Average score for the implementation of the environmental measures in the action programme per cluster of company departments. A score of 1 signifies poor implementation or no implementation at all; 5 signifies excellent implementation**



- 1 = impregnation installation and surroundings
- 2 = exit track of impregnation process
- 3 = storage of salt solutions and creosote oil
- 4 = storage of vessels of impregnation agents
- 5 = approval of impregnation installation
- 6 = post-treatment installation
- 7 = storage of impregnated wood
- 8 = average score of the clusters

### 3.1.1 Impregnation installation and surroundings

The execution of this part of the action program required the presence of provisions in the impregnation area such as liquid catchment, measuring and control equipment and floors impermeable to liquids. Three-quarters of the companies complied with this part of the action program. Two companies met almost none of the requirements.

### 3.1.2 Exit track of impregnation process

Particular attention was given to the catchment of the liquid released during the removal of the wood and to the presence of floors impermeable to liquids. More than half of the companies that impregnate with salt complied with this part of the action program. Four companies fell far short of the requirements. With three of the four companies impregnating with creosote oil the compliance was poor or unsatisfactory. In particular it was seen that the companies which did not meet the requirements in this part of the process lacked good facilities to catch the impregnation liquids.

### 3.1.3 Storage of salt solutions and creosote oil

This part deals with the storage of salt solutions in the storage reservoir, the mixing tank and of the storage of creosote oil in above ground steel tanks. The agreements in the action program cover optimum and safe storage conditions to prevent the undesirable release of the impregnation agents to the surroundings. Three-quarters of the companies complied with this part of the action program. Three companies complied with only a few sections of the requirements. A feature that was relatively frequently missing was the high level or overfilling protection on the salt solution storage reservoirs.

### 3.1.4 Storage of vessels of impregnation agents

The directives of the Committee for the Prevention of Disasters, CPR 15-1 and 15-2<sup>3</sup> of the Netherlands apply to the storage of impregnation agents in vessels as received from the supplier. Twenty-one companies have a method of storage of the impregnation agents such that they should comply with these directives. More than half the companies observed these directives to a high level. Nine companies clearly did not comply with the directives. In particular this was because the storage room itself did not comply with the regulations (for example the storage area was not separated from other activities) or because the impregnation agents were not stored separately from other materials.

### 3.1.5 Approval of impregnation installation

The impregnation of wood is carried out in tanks subjected to both vacuum and pressure. The tanks must therefore be periodically approved by a recognized agency. The agreements on this point in the action program were complied with by two-thirds of the companies.

### 3.1.6 Post-treatment installation

Eighteen companies impregnating the wood subject it to a post-treatment process with steam or hot air (fixing process). The agreements in the action program covering the post-treatment installation are aimed in primarily at the prevention of leakage. All the companies catch and reuse the liquids released during fixation. Sixteen companies complied with the agreements in the action program. Two companies did not comply with the agreements. One company had a catchment reservoir which is not completely leak-free and the other company transported the wood to the post-treatment installation using a route which is not provided with a ground surface impermeable to liquids. The other companies use natural fixation instead of a post-treatment process. In most cases this took place in a roofed area. Two smaller companies made do with the use of tarpaulins.

### 3.1.7 Storage of impregnated wood

In the action program it was agreed that impregnated wood should in principle be stored in an area with a floor impermeable to liquids. The companies using the salt impregnation process can catch the rainwater running off the wood in a buffer tank and reuse it. Alternatively the storage area can be roofed over, so avoiding contamination of the rainwater through leaching of the impregnation agents from the impregnated wood. The study shows that one third of the companies have realized this situation to a far-reaching degree. About half the companies have a storage area of which part of the ground is impermeable to liquids or roofed over. The wood which has recently been impregnated is stored in this area, and then after a few weeks moved to an area where no provisions have been taken to protect the soil. The other half of the companies had a storage area which was completely or partly paved with bricks or an asphalt surface which was cracked.

### 3.2 Checking the quality of the soil

The environmental measures in the action program provide for the periodic investigation of the quality of the soil in the storage area. When the storage is in an area in which the surface is impermeable to liquids, then the agreement is that the groundwater be sampled once every five years and analyzed for the presence of the impregnation agents used by the company. When the storage is in an area where the surface is not impermeable to liquids, then the soil and the groundwater are to be sampled once a year and the samples analyzed for the presence of the impregnation agents. In both cases the soil should be examined before December 31, 1994. It was found that this investigation has actually been made by only a limited number of companies (four). The results are sometimes difficult to interpret because of earlier soil pollution. They indicate that the influence of leaching on soil contamination is limited. Eight companies had plans to carry out the soil examination in mid 1995. At the time of the study the other 24 companies had as yet no plans.

#### 3.2.1 Leaching tests

One of the possible causes of earlier pollution of the soil is the leaching of impregnation agents from the stored preserved wood. In the action program agreements were made about the leaching standards for wood impregnated with salts or creosote oil and the annual checking of these standards. The study shows that all the companies, except four, have the annual check carried out and meet the specified leaching standards. Nearly 80% of the companies who have this leaching test carried out are in the possession of a certificate with a paragraph on the environment which includes an explicit statement about the leaching standard.

#### 3.2.2 Soil examination and clean-up

In addition to the periodical soil examination the action program also specifies that a preliminary soil analysis for the quality of the soil and the groundwater must be carried out before October 1, 1992. To date 31 of the 36 companies have carried out an examination of the soil. Table 1 shows a summary of the analyses of these samples.

**Table 1. Number of companies where soil contamination has been found**

Contamination of soil and groundwater	Number of companies
All parameters under the intervention level(4)	17
One or more parameters above the intervention level	14

When one or more intervention levels were exceeded at the fourteen companies then this was for the heavy metals (especially arsenic) and polycyclic aromatics. Of the twelve companies where the intervention levels were exceeded one company has nearly completed the clean-up of the soil, two companies have started the clean-up, five companies have plans to clean-up the soil and four companies have as yet no plans.<sup>4</sup>

### 3.3 Reduction in the emission of polycyclic aromatics by creosoting companies

In addition to the other agreements the companies impregnating with creosote oil had also agreed to use only high boiling point creosote oil (with a distillation range such that at 300°C a maximum of 5% volatile constituents are present) from 1 July 1994. The aim is to reduce the emission of polycyclic aromatics into the atmosphere by 90% as compared with 1985. Three of the four companies complied with this requirement at the time the study was made. At the time one of the four companies was still using a creosote oil which contained 45% volatile constituents at 300°C. Since the study this company has also switched to high boiling point creosote oil.

### 3.4 Company environmental management

A company environmental management system is an important means of implementing and managing the measures resulting from the target group discussion in individual companies. The initiative to introduce such a system in the wood preservation industry has been allocated to the trade-association.

In the action program it was agreed that the companies would submit a company environmental plan to the competent authority by October 1, 1992, which was to contain an explanation of how and when the environmental measures were to be implemented. In a later stage it was agreed with the Association of Wood Preservation Establishments in the Netherlands that this company environmental plan would form part of the future environmental management system for this sector of industry.

#### 3.4.1 The role of the trade-association

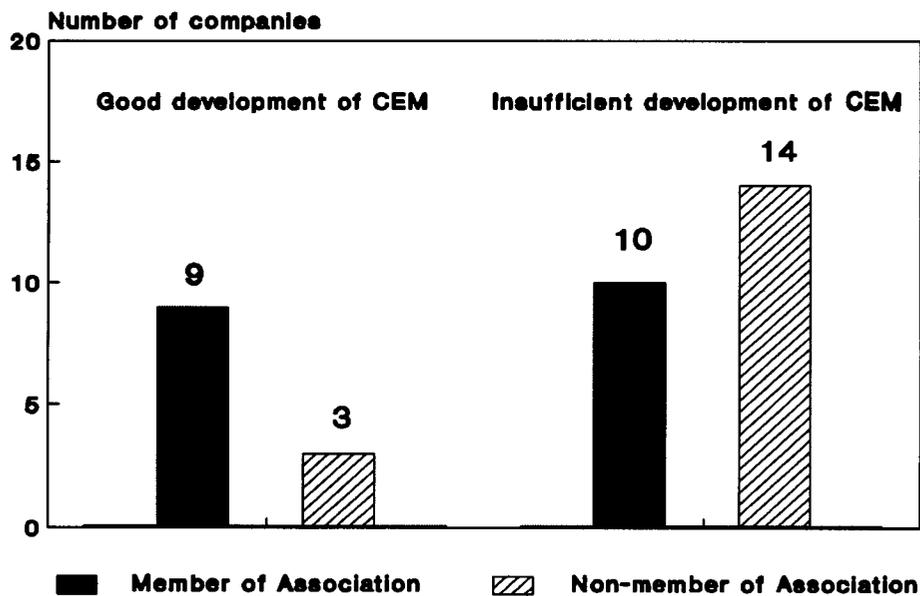
The Association of Wood Preservation Establishments in the Netherlands fulfilled its duty by arranging for the development of a model management system. The system is largely based on BS 7750 (British Standard) and was completed in mid 1993. The system is documented in an environmental management manual. The contents of the manual include a statement of the environmental policy and general information about environmental legislation and regulations of relevance to the industrial branch. The manual also contains a checklist which companies can use to assess to what extent the agreements from the target group policy have been implemented.

On the basis of this assessment the companies can draw up a company environmental plan, so that the shortcomings can be rectified. The trade-association promoted the introduction of the environmental management system with newsletters, an instructional video tape, meetings of company environmental coordinators and the organization of a symposium. The non-members of the trade-association also participated in the symposium and they received copies of the instructional video tape.

3.4.2 Introduction by the companies

Members of the Association of Wood Preservation Establishments have copies of the environmental management manual as drawn up by the trade-association. Of the other companies (the approximately 50% non-members), three had an environmental management manual which had been drawn up on their own initiative. Four companies had drawn up a (simple) company environmental plan based on the environmental measures in the action program. The other companies had not yet made any attempt to develop a company environmental management system or even a simple company environmental plan. Except for one company none of these are members of the trade-association. Most are small companies; their combined production of impregnated wood is less than 10% of the total production in the Netherlands and in most cases they have less than five employees.

Figure 2. Development of company environmental management (CEM) systems by the wood preservation companies in the Netherlands



The possession of an environmental management manual is a condition for a company environmental management system, but it does not guarantee that it is actually used in practice. This proposition is confirmed by the results of this study (see Figure 2). Only half of the members of the trade-association who had a copy of the association's manual had worked on an environmental management system. Evidence of working on such a system is the possession of a clear program of the environmental measures which are to be taken (planning, responsibilities, safeguards), thorough integration in company management (clearly defined responsibilities) and the existence of, or plans for, an internal environmental report. The formulation of an external environmental report is receiving attention from the companies (five companies have plans for this report), but at the time of this study the reports had not yet been drawn up. The general situation was similar for the three companies which had independently developed a company environmental management system.

**Table 2. Summary of the agreements in the action program incorporated in environmental licences**

Measures from Action Program in the License	Number of Companies
All measures	8
The majority of the measures	7
A few of the measures	7
No measures	14

The other members of the trade-association have until now given insufficient attention to the introduction of the company environmental management system as provided the association. In a number of cases there was a plausible reason (the company is just starting up, there is a changeover to a new method of process control), but the general picture with this group was not very positive.

### 3.5 Incorporation of environmental measures in the license issued by the municipality

An important part of the requirements for environmental protection which must be met by a company are included in the environmental license. For each of the 36 companies in this study an investigation was made of which licenses were required, which have been issued, and in how far the licenses were up to date. The licenses were also assessed on their contents. In this assessment special attention was given to the extent to which agreements in the action program had been incorporated in the license issued by the competent authority (the municipality). All companies possessed a license as required by the Environmental Management Act of the Netherlands. Of these 36 environmental licenses eighteen had been issued before 1990; the average year of issue for all companies was 1987.

The action program for the wood preservation industry came into force in May 1992. It was agreed with the municipalities that the environmental measures from this action program would be incorporated in the licenses with priority. The study included an investigation of the extent to which this agreement had been honored by the end of 1994.

**Table 3. Summary of the number of company inspections by municipalities**

Number of inspections in the two years preceding the study	Number of companies
None	8
One, two or three inspections	18
Four inspections	6
Five inspections or more	4

In view of the average year of issue of the license this result is not surprising. The reasons for the backlog were stated to be uncertainty over the future plans of the company and having other priorities. In a number of cases it was found that the municipality was not sufficiently aware of the existence of the action program. Most companies, certainly the larger ones, are thoroughly familiar with the environmental measures in the action program. The average quality of the licenses was assessed as not very satisfactory (score 2.9 on a 5-point scale). The most important inadequacies of the licenses concerned protection of the soil.

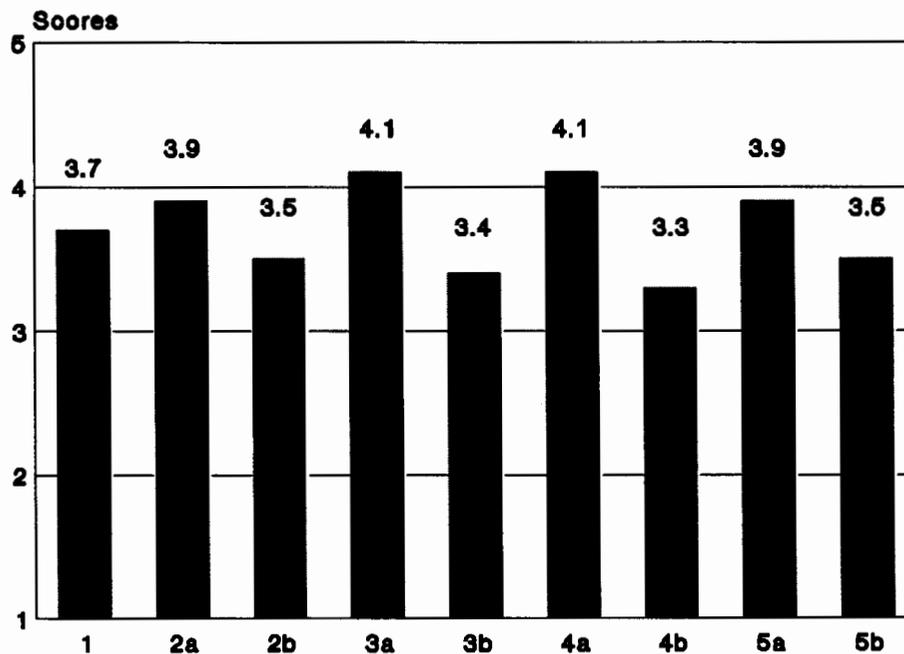
The quality of the licenses of companies which are members of the Association of Wood Preservation Establishments in the Netherlands is in general better than that for non-members (average score 3.2 compared with 2.6). This does not mean that all members had a satisfactory license. In five cases the license was judged to be unsatisfactory. Conversely, three companies which are non-members had a satisfactory license.

### 3.6 Enforcement

During the study an investigation was made of the way in which municipalities supervise compliance with the environmental license. As part of their enforcement task the municipality should regularly visit each company to which it has issued a license. During this visit the municipality should preferably give attention to all relevant environmental matters. Part of the procedure is the reporting of the findings, and informing the company of these. If necessary the municipality can resort to administrative powers, criminal proceedings and sanctions. The number of inspections made by the municipality in the two years prior to the study were investigated. The standard for this kind of company has been specified as two inspections each year.

Eight companies had not been subjected to any inspection by the municipality in the previous two years. The final assessment of the quality of the enforcement was based on the frequency of the inspections and a number of qualitative aspects (degree of supervision, written reports and follow up). The average assessment of the quality of enforcement - which of course was influenced negatively by the simple fact that about one quarter of the companies had not been inspected at all — is not very satisfactory (score 2.9 on a 5-point scale).

**Figure 3. Relationship between the implementation of the environmental measures in the action programme with other factors. Score: 1 = poor implementation, 5 = excellent implementation**



- 1 = average score of the clusters  
 2a = licence of good quality  
 2b = licence of bad to moderate quality  
 3a = sufficient enforcement  
 3b = insufficient enforcement  
 4a = member of Association  
 4b = non-member of Association  
 5a = good development of Company Environmental Management System  
 5b = insufficient development of Company Environmental Management System

## 4 DISCUSSION

### 4.1 Relationship between the implementation of the action program and other factors

The previous chapter described the way in which companies have fulfilled the agreements made as part of the target group policy. Figure 1 (section 3.1) showed that most parts of the action program are being executed in a manner which can be described as good to reasonable.

This paragraph will investigate whether there is a relationship between the execution of the action program and the following factors:

- Incorporation of the action program in the environmental license.

- Quality of the enforcement.
- Membership of the Association of Wood Preservation Establishments in The Netherlands.
- Development of company environmental management.

The results of this analysis are summarized in Figure 3. In each case the average score for the implementation of the environmental measures in the action program is shown for two contrary situations (for example good against poor).

- The incorporation of the action program in the environmental license (2a/2b in Figure 3).

On average it can be seen that for five of the seven sections of the action program investigated the execution of the measures in the action program is better when these measures are incorporated as regulations in the license.

- The quality of the enforcement (3a/3b in Figure 3).

It can be seen that when the quality of enforcement is good (score 4 or more, see section 3.5) the execution of the action program is on average better than for companies where the quality of enforcement by the municipality is found to be poor (score 2 or less).

- The membership of the Association of Wood Preservation Establishments in The Netherlands (4a/4b in Figure 3).

It can be seen that members of the trade-association have on average carried out a better implementation of all parts of the action program than the companies that are not members. But there are also members who have implemented the program to a lesser extent, just as there are nonmembers who have carried out a better implementation of the program. The members of the trade-association produce 77% of the yearly amount of impregnated wood. All of the larger companies, with one exception, are members of the trade-association. These companies have correctly executed most of the environmental measures in the action program. The agreements about the storage area for impregnated wood have been at best partly implemented by all companies, including the larger companies.

- The development of company environmental management system (5a/5b in Figure 3).

An impression of the influence of an environmental management system which is working as it should on the behavior of companies in their compliance with environmental regulations was obtained by comparing the scores for compliance with the environmental measures in the action program (see section 3.1) with each other. The group which had been judged to have a reasonable to good management system scored on average 3.9, whilst the group which has no effective management system had a lower score of 3.5. However this latter group does contain companies which have achieved a (very) high level of implementation of the environmental measures.

#### 4.2 Licensing and enforcement in relationship to company environmental managementsystem

A good company environmental management system gives an insight into the emissions caused by the company and the risks, the measures which have been taken or are to be taken to minimize them and the effectiveness of the measures. These factors are also of importance for the issue of the environmental license and its enforcement. It is reasonable to suppose that the competent authority takes the existence of a company environmental management system into consideration when issuing the environmental license, reporting incidents and with enforcement activities. This section investigates whether this is the case.

When companies had a good environmental management system at the time the license was issued (which was the case with three companies) then the municipality used this company environmental management system to issue the license by incorporating parts of it in the license or by referring to it in the license.

There are more contacts with companies during supervision (enforcement) than when issuing licenses. The study shows that with enforcement activities a good environmental management system played an important role in only half of the cases. The reason given for the limited attention was that the management system is not (yet) part of the license, and therefore is not of significance with regard to enforcement. This is, strictly speaking, a legitimate argument. Nonetheless it would be advisable not to wait until the system is part of the license, but to make a start with giving attention to the company environmental management system during inspections. The role of company environmental management systems will obviously become more important in the future; and companies experience the active use of a company environmental management system as an environmental effort. Conversely the situation must be avoided where companies think of a good environmental management system as a reason to consider 'normal' enforcement activities to be superfluous.

## 5 CONCLUSIONS

The following conclusions can be drawn from the study made by the Inspectorate for Environment into the compliance with the 'Action program for Environmental Measures for Wood Preservation Companies'. These conclusions concern the companies, the trade-associations as well as the municipalities.

### 5.1 Implementation of environmental measures by the companies

All the large companies have implemented the majority of the environmental measures in the action program. This is also the case for most of the smaller companies. The environmental measures covering the impregnation process as such (impregnation and fixing) have been correctly implemented by most of the companies. The observance of directive CPR 15-1 by the companies impregnating with metal salts leaves much to be desired. The implementation of the agreements about the exit track from the impregnation tank by the companies impregnating with creosote oil was only moderate to unsatisfactory.

The environmental measures in the action program covering the storage space for the impregnated wood have been implemented to only a limited extent. Two-thirds of the companies, including larger companies, store impregnated wood in the open and on a surface which is not impermeable to liquids. At the time of the study periodic soil examination in the storage area had not been implemented by the companies, including the larger ones. The companies consider

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the environmental measures concerning the storage of impregnated wood to be too strict. A number of companies have also indicated that as the result of the use of better impregnation and fixing techniques, the amount of leaching during storage has been reduced to such a degree that the risk of soil pollution during storage is negligible.

In general members of the trade-association have implemented the action program better than non-members.

#### 5.2 Reduction in the emission of polycyclic aromatics by the creosoting companies

All four creosoting companies active in the Netherlands use high boiling point creosote oil. This is as such a proper implementation of the agreements made to reduce the emission of polycyclic aromatics by the creosoting companies.

#### 5.3 Introduction of company environmental management

The trade-association has correctly carried out its role in the introduction of environmental management systems by individual companies. The introduction of an environmental management system has been carried out correctly by one third of the companies. In general these companies have implemented the environmental measures in the action program better than the others. Eight of these companies are members of the trade-association. One third of the companies have done nothing towards a company environmental management system. These are smaller companies, in most cases fewer than five employees.

#### 5.4 Incorporation of the measures in the environmental license by the municipalities

All companies have licenses as required by the Environmental Management Act. A quarter of the licenses were issued after the action program came into force (1992). In two-thirds of the licenses the environmental measures in the action program are not incorporated or only marginally incorporated. In qualitative terms these licenses are unsatisfactory. Individual municipalities have given insufficient attention to the agreement which was made to give priority to incorporate environmental measures from the action program in the licenses. The main reason given was that the municipalities have other priorities. In some cases the municipality did not know of the action program.

When the environmental license includes the environmental measures from the action program then the implementation is better.

#### 5.5 Enforcement of the environmental license

The supervision by the municipalities of the compliance with the regulations of the license is not yet in all cases at the required level. Three-quarters of the companies have had one or more integral inspections with regard to compliance in the last two years. One quarter of the companies have had no inspections at all. Just one-third of the companies have undergone inspections at the required frequency.

Correct enforcement has a positive influence on the implementation of the action program.

The general conclusion is that most of the companies have implemented the environmental measures in the action program in a way which can be considered as good to satisfactory. The municipalities have lagged in the incorporation of the environmental measures in the license. It would appear that environmental management has become part of company thinking to an extent such that agreements that have been made are being honored - and are

being honored even when they are not incorporated or only partly incorporated, in the environmental license. Considered in the light of the target group policy this is a positive development. It shows that for environmental protection the covenant has had a greater value than the traditional instrument of the license. The passive attitude in general shown by the municipalities in incorporating the environmental measures from the action program in the environmental license has had a negative effect on enforcement- after all agreements are not of a nature such that they can be enforced. It should be realized that the wood preservation industry is a small and very homogeneous branch of industry, with a high degree of organization, where the trade-association plays a very active part in the area of the environment. This, together with the fact that the action program consists of a set of concrete measures, creates optimum conditions for the implementation of the target group policy.

## **6 RECOMMENDATIONS**

The recommendations which can be made based on this study by the Inspectorate for the Environment are grouped together for the various participants concerned.

### **6.1 Municipalities**

- Those licenses issued in accordance with the Environmental Management Act in which the environmental measures in the action program have not yet been incorporated to a sufficient extent should be updated. When this is being done priority should be given to the companies which have not yet implemented the environmental measures to a sufficient extent.
- When issuing licenses the company environmental management system should be used where this is available. Company environmental management systems should receive attention during inspections.
- The frequency of inspections should be increased to the required level. Those companies which have not yet implemented the environmental measures from the action program should receive a high priority.

### **6.2 Trade association**

- The stimulation and monitoring of the introduction of the company environmental management system developed for the industry should be continued. Extra attention should be given to the smaller companies and solutions more suitable to their needs should be made available to them.
- Active attempts should be made to increase the degree of organization within the wood preservation industry. During these attempts the smaller companies active in the industry should not be forgotten.

### 6.3 Wood preservation companies

- The environmental measures in the action program which have not yet been implemented should be carried out. In particular attention should be given to the agreements made about the periodical examination of the ground where impregnated wood is stored.
- More efforts should be made to introduce a company environmental management system, where the model developed by the trade-association should be used.

### ENDNOTES

1. Substances on the black list are so designated because of their detrimental influence on the environment. In the Netherlands the government is making efforts which include the elimination of pollution by substances on the black list.
2. Priority substances are so designated because the risk (the combination of exposure and properties) they cause is greater than the negligible risk. In the environmental policy these substances receive special attention.
3. Directives from the CPR (Committee for the Prevention of Disasters) for the storage of dangerous substances; CPR 15-1 is applicable for amounts up to 10 tons, CPR 15-2 for amounts above 10 tons.
4. When the intervention level is exceeded then the pollution of the soil is deemed to be serious, and clean-up measures are required.

### REFERENCES

1. National Environmental Policy Plan, May 1989; National Environmental Policy Plan Plus, June 1990; National Environmental Policy Plan 2, December 1993.
2. Circulaire Werkprogramma milieumaatregelen bij houtimpregneerbedrijven ('Action program for environmental measures for wood preservation companies'), May 1992 (available only in Dutch).



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## SPECIAL TOPIC WORKSHOP F

### Measures of Success

Papers and Workshop F discussions address the following issues:

- What success is for a compliance and enforcement program:
  - 100 percent compliance with 100 percent perfect permits or licenses, or if it is less than this, how success should be described;
  - environmental improvement and, if so, how improvements can be attributed to implementation of compliance and enforcement programs (e.g., emissions or effluent reduction; improved practices; accurate reporting and monitoring);
  - implementation of a specific strategy (e.g., numbers and types of inspections performed; enforcement response (type, timeliness, whether policy is followed); penalties and sanctions (number, levels, whether policy is followed), dollars spent on compliance programs; and
  - how we can assess whether our priorities are correct.
- Whether to consider the success of compliance monitoring in terms of:
  - inspections of a percentage of the regulated community (Broad presence);
  - inspections of the worst noncompliers. At the most significant sources of pollution (Targeting); and
  - ability to detect significant violations.
- How we can measure the deterrence created by enforcement:
  - levels of penalties and extent of sanctions imposed and whether this measures our success, failure, or both; and
  - repeat violator rate; return to compliance; excess emissions reduced, etc.
- Cost and reliability of obtaining information on success and results.
- The audience for measures of success and whether the different audiences require different information.

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1.	Summary of Measures of Success Workshop, <i>Facilitators: J. Peters, C. Wasserman, Rapporteur: J. Mozingo</i> .....	481
2.	Measuring the Success of Compliance and Enforcement Programs, <i>R.F. Duffy</i> .....	489



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## MEASURES OF SUCCESS

Facilitators: Jit Peters, Cheryl Wasserman  
Rapporteur: Jack Mozingo

### GOALS

Workshop participants focused on the following questions:

- What is success for a compliance and enforcement program and what are the results for which we are looking? Who is the audience for measures of success? Do the different audiences require different information?
- How do we measure the results of our compliance and enforcement programs and the effects of enforcement? How can we get quantitative assessments that are meaningful and what are reasonable surrogates? How do we assess quality? (e.g. of inspections) What is the cost and reliability of obtaining information on success?
- How do we use the measures to help manage programs? How do we relate what is done to the results? How do we assess success of actions against goals and whether our priorities are correct? How can we set reasonable goals? How do we ensure compliance is the goal rather than enforcement?
- What performance measures should be used by the regulated community in implementing compliance objectives under ISO 14000?
- How can we communicate success so the public understands and appreciates accomplishments?

## 1 INTRODUCTION

Effective management of environmental compliance and enforcement programs depends on our ability to communicate program success and progress through appropriate quantitative and qualitative measures. Such measures allow managers to track resource use and the effectiveness of activities, communicate with the public and gain program support, convince the regulated community of the importance of compliance and consequences of noncompliance and relate a degree of success to particular sets of activities so adjustments can be made to ensure program effectiveness. Participants discussed challenges in coming up with meaningful measures, developing and communicating accurate information, and relating to a range of purposes and audiences for this information.

## 2 PAPERS

A paper by Richard Duffy entitled, "Measuring the Success of Compliance and Enforcement Programs" in the Proceedings describes the evolution of the use of measures to manage, evaluate, and communicate program success within the United States and current attempts to enhance the use of environmental indicators (e.g. pollutant loadings reduced,

environmental quality restored or changed) in addition to traditional measures of activities (e.g. numbers of inspections, numbers of enforcement actions), compliance results (e.g. rates of compliance, return to compliance of significant violators) and enforcement results (cost of injunctive relief, value of supplemental environmental projects, timeliness and appropriateness of enforcement response, levels of fines and length of jail terms). The "Principles of Environmental Enforcement" text chapter on accountability and evaluation proposes a list of measures and their potential use in program management, advantages and disadvantages.

### **3 DISCUSSION SUMMARY**

#### **3.1 Defining "success"**

Discussion first centered around the question of what "success" is for an environmental compliance and enforcement program. Participants generated a list of possible ways to define success including:

- Creating an atmosphere or culture of compliance; increase in the rate of compliance; no violations.
- Improving environmental quality - reducing water pollution, air pollution, etc.
- Depending on objectives, success could be:
  - fewer demonstrations (e.g. public satisfaction)
  - reduced government role
  - least cost to encourage compliance
- Achieving something that gives a feeling of pride and accomplishment in our work; something "to feel good about".
- Reduction in repeat violators and/or success in attacking the hard core of noncompliance.
- Enforcement response achieves intended results.
- Inspections are of good quality, appropriately detect violations.
- All of the above, in a continuous improvement model.

The participants concluded that, "there is no one magic formula". Each of these ways of measuring success were valid when viewed in the context of various program objectives.

#### **3.2 Why Measure Success and for whom?**

In exploring the purpose for measuring success it became apparent that there are many potential reasons for measuring success, including to:

- Know what you are doing.
- Evaluate how well you are doing:
  - link activities, results, and goals
  - improve the approach to enforcement and compliance
  - assess the effectiveness of specific compliance and enforcement tools

- Justify budget/resources: to stay in business.
- Motivate:
  - the regulated community to comply
  - enforcement and compliance agency personnel
  - public support
- Take credit for improvements (where other factors may also apply) for both professional and personal reasons.

The range of reasons also corresponded to a range of potential audiences for measures of success including internal management, budget and resource managers, the general public, the regulated community and officials who must support decisions on resources and authorities. During discussions and sharing of experiences, it became apparent that what may be a good measure for one purpose may not be useful for another purpose. Participants concluded that measures should be related to specific program objectives, but also to these different audiences and purposes.

Participants also agreed that a number and range of measures are needed to address a range of audiences and purposes and that no single measure will satisfy all needs even for a single audience. Programs need a range of measures and these must be suited to specific audiences and purposes. The concept of "measuring success" was also challenged in that it may place too much emphasis upon "success" rather than "progress" thereby raising expectations prematurely in early stages of program implementation which may take some time to yield results.

### 3.3 Measures in use

Participants listed many different measures potentially and currently used by environmental compliance and enforcement programs, including:

- Number of inspections.
- Number of violations.
- Rate of compliance.
- Types and targets of noncompliance.
- Amount of fines.
- Industry composite indicators.
- Stopping pollution sources.
- Extent to which industry is committed to environmental goals.
- Correction of noncompliance.
- Number and type of enforcement responses.
- Stopping environmentally damaging projects.
- Reduction in pollutant loadings.
- Amount and cost of pollution control equipment.
- Public awareness and participation: increases in number of visits to library, hearings requested, demonstrations.
- Increase in agency budget.
- Degree of public and/or parliamentary attention and support.

- Number and time to respond to complaints.

### 3.4 Measuring success: current experiences

Participants shared individual experiences with successful program accomplishments and measures used to describe them and manage for them. The result of these discussions were a set of principles which cut across all the experiences.

#### 3.4.1 Number of inspections performed by local governments: getting local government to fulfill commitments to inspect sources in the Netherlands

In the Netherlands local governments have not undertaken environmental inspection activities to the extent they were responsible under national law. Indeed many have not undertaken any inspections. The national government provided funds and established agreements with local communities to undertake these inspections. The number of inspections compared against the plan was used as a measure of success. This measure also provided an accounting of whether funds were properly spent. Participants in the workshop discussions recognized that over time the number of inspections alone would not be a good measure of success since there would be further expectations in regard to what was done with the inspector findings of noncompliance in order to demonstrate that the program of inspection and enforcement response was resulting in compliance and environmental improvement.

#### 3.4.2 Communicating with the public on non-compliance when success looks like failure: number of violations/types and targets of noncompliance (Norway example)

In Norway, the Norwegian Pollution Control Authority for years has reported the number of controls and the number of violations on an annual basis. Since one of the targets of the agency's controls is companies with the highest possibility of having violations, the reports through the years show little or no decrease in the number of violations. This has caused confusion since many regard the report as a status of the environmental behavior of industry. This news also was received by the public as a failure rather than as a success since there were no other measures of performance such as increasing rates of compliance. The Authority now stresses heavily that the controlled companies are in no way a representative sample of Norwegian industry.

Participants discussed the difficulty of finding measures of program success which adequately communicated with the public. Discussion focused on the problem of interpreting quantitative results without qualitative information about the status of the program and what the trends mean. For example, an increasing number of violations is a success in a program seeking to improve detection and a failure in a program trying to reduce the rate of noncompliance.

#### 3.4.3 Increasing public support and involvement in industrial compliance (Thailand and Malaysia experiences)

In programs such as those of Thailand and Malaysia increased numbers of public demonstrations are measures used to evidence an increase in desired public involvement. Other workshop participants were at first very surprised at this measure of success since this activity is considered a negative indicator in countries with a tradition of public involvement. Following discussion it became apparent that because of the importance of political support for industrial compliance, such activity is an indicator of an informed and supportive citizenry and was therefore a very good measure of program success given this objective.

3.4.4 Sending the deterrence message to the regulated community - problem of keeping up the trends: supplementing information on amount of fines and jail terms with environmental results measures (United States example)

In the United States, a range of measures of activity (numbers of inspection, numbers and types of enforcement response, timeliness of enforcement response), and results (compliance rates, return to compliance by significant violators, fines, jail terms and investments in compliance, prevention, and correction of damages undertaken through enforcement actions) are used on a routine basis. Recent efforts to better communicate with the public and manage with more consideration of environmental risk is resulting in new measures being added to address pollutant loading reduced for each enforcement action, and cumulative environmental results wherever possible to do so. The U.S. is trying to ensure environmental measures accompany every enforcement action. In addition, measures have recently included expenditures on compliance that result from enforcement actions rather than a focus just on penalties and fines, a surrogate for benefits to the environment and indicator of strength of deterrence.

3.4.5 Potential for government officials to use emerging industry indicators of performance

The industry representative at the workshop and Conference offered the perspective and efforts of industry to find good measures of performance to support internal programs and external communications and ISO 14000 commitment to continual improvement in management systems. One example is that used by Merck and Company, a pharmaceuticals company, to develop a Composite Compliance Progress Indicator:

- Score of zero on facility index (private sector self-audit program). Index is based on several factors, among them:
  - number of incidents multiplied by relative impacts
  - publicity (amount and exposure of news coverage)
  - severity and number of violations per audit
  - amount of time to remedy
- Score is normalized for complexity of facility.

Participants observed the potential for such industry developed measures to be adopted by regulator agencies as well to establish trends over time.

3.4.6 Stopping pollution sources

Mexico recently communicated its resolve to respond vigorously to violations by presenting statistics on the number of pollution sources closed down. The case study from Israel in the Proceedings related to closing and shutting down illegal hazardous and non-environmentally sound land fills was also noted in the discussion. Participants felt that such measures can be powerful in communicating a deterrence message, but in the long term may not alone serve as the measure of program success unless tied to broader program objectives and measures. In the general context of industrial operations, shutdowns are in one sense success but in another a failure and with greater compliance, the number will presumably fall and success will be difficult to distinguish from a lack of government will if there are fewer plant shutdowns. In the case of the Israeli case study, the primary objective was to ensure proper waste disposal and the effect of shutting down illegal or legal operations with their integrated strategy of providing sound

alternatives depends upon the availability and use of alternative facilities. The discussion again pointed to the importance of changing measures over time to correspond to the maturity of the program and its objectives and to putting such numbers in context.

3.4.7 Getting to environmental results: protection of shellfish beds through enforcement; use of staged measures (British Columbia, Canada example)

Participants discussed the lessons learned from this experience including a) the importance of environmental indicators of success where possible to communicate with both the public and ultimate program strategic priorities; b) the delay in getting environmental results data in implementing programs; and c) the life cycle of a program and need for a range of measures to be used in a program context.

In British Columbia, Canada, where shell fish beds needed protection enforcement was identified as an essential means of achieving this goal. Measures evolved over time from numbers of enforcement actions initiated and inspections undertaken in the early states to penalties and clean up imposed through enforcement to eventually measure shellfish bed improvements.

#### 4 CONCLUSIONS

There are many ways to define success for an environmental compliance and enforcement program. Participants in this workshop developed a potential list of measures with dozens of activity and result measures, but agreed upon several principles.

- A mix of quantitative measures and qualitative assessments is needed. No single statistic can be made useful particularly in the absence of qualitative information. They should also reflect the full range of responses from encouraging compliance and providing incentives to enforcement response.
- There must be a linkage between program objectives and measures appropriate to those objectives: Purposes may range from seeking to support requests for program resources, to assessing performance, to seeing if actions resulted in desired results, to assessing overall strategy and accomplishments. Measures of success identified by participating countries ranged from counting inspections to measuring concentrations of toxic pollutants in shellfish. They included reductions in government roles, reductions in repeat violators, and increases in compliance rates. Within a specific context, what is success to one country may not be success to another, depending upon program development, life cycle, and other factors.
- We must also keep in mind that enforcement is only one part of the program, and cannot be separated.
- The ideal measure of compliance and enforcement success is improvement in environmental quality, however: 1) it is very difficult since many other factors affect environmental quality; 2) indicators of enforcement or compliance activities such as numbers of inspections or numbers of penalties are necessary to know what we are doing; and 3) indicators of environmental improvement often require elapsed time before they are either available or reflect the benefits of enforcement activity.

- There appears to be a natural life cycle to a program and what are appropriate measures of success at different stages of the program. For example, inspections will precede enforcement response will precede enforcement results such as fines, compliance and investments in pollution control and all of these will precede environmental quality improvements. In addition, from a management standpoint we can:
  - Initially measure enforcement organization activity: number of inspections, violations, fines.
  - Then, measure follow up to noncompliance: amount and size of fines.
  - As performance and compliance improves, measure changes/improvements in technologies.
  - Once demonstrated, measure and report on environmental improvements.
- Multiple audiences for measures must be addressed and new sources of creative ideas developed for evaluating progress - potentially a preferred concept to that of measuring success. Measures used for internal management may be either insufficient or unconvincing for our external audiences.
- Enforcement has a multiplier effect which must be taken into account in interpreting and using measures of success. It was noted that achieving reductions in substantive violations could lead to increased attention to other types of violations, such as reporting, record keeping, monitoring, etc., which cannot be measured in environmental result terms.

We should work on the development of environmental indicators. Those are difficult to relate to enforcement activities since so many other factors affect environmental quality. Several leading industries have developed composite measures of their own compliance and environmental performance that might be useful including several shared with the group which weighted number of incidents, their severity and the complexity of the facility's operations.

In brief, there is no one magic formula.



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## **MEASURING THE SUCCESS OF COMPLIANCE AND ENFORCEMENT PROGRAMS**

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### **SUMMARY**

This paper reviews the history of the United States Environmental Protection Agency's (EPA) efforts to measure the success of its enforcement programs, and it discusses recent efforts to improve its measurement of the environmental and programmatic results achieved through enforcement. In preface to this discussion it is useful to introduce two axioms which have been employed during EPA's past and current efforts to develop measures of success for its programs. The first is stated in the positive and says that "what gets measured, gets done." Under this axiom, well defined measures will encourage the correct things to happen and the quality of work will be high. The second is stated in a more cautionary tone and says "be careful what you ask for, you might get it." Under this axiom, poorly defined measures of success, or a management system overloaded with measures of low priority activities, may actually encourage ineffectiveness and inefficiencies and result in unintended or undesired outcomes.

EPA is striving to employ measures of both environmental and compliance results, rather than relying solely on measures of the activities of EPA and state compliance and enforcement programs. There are many challenges ahead in developing these results measures. Among the most challenging tasks is developing measures which serve the multiple purposes of helping managers manage and communicating externally to the public and the regulated community about progress that has been made and the continuing importance of ensuring environmental compliance.

### **1 MEASURES OF SUCCESS**

Measures of success are vital tools for effectively guiding and implementing compliance and enforcement programs and communicating results to the public and policy makers. Information about program activities and results, and information about what is happening at regulated facilities, can ensure that individuals responsible for pursuing compliance and enforcement are, in fact, doing so consistently and fairly using established procedures and strategies. This information can help managers adjust compliance and enforcement programs to changing conditions, and provide lessons learned as the program is implemented. Periodic program evaluations based on activity and results information gathered through the measures of success serve many purposes including evaluating program goals, strategies, internal agency accountability and public accountability, and creating deterrence among regulated facilities.

Success can be measured in two basic ways. One involves setting goals or targets and then comparing actual activity to the goal. An example of this approach is establishing the number of facilities that will be inspected during the year and then comparing actual performance

with commitments. A second way of measuring success involves no formal commitments about output levels but instead tracks results by looking for trends and changes in conditions (either environmental or programmatic) over time. Under either method, how the desired products or results are defined is crucial to having effective measures and effective programs.

Following the axiom "what gets measured, gets done," if measures are well defined the program is more likely to be successful and produce the correct results. If, however, the measures are poorly defined the management system may actually encourage ineffective and inefficient activities. Like water flowing down a hill, organizations will tend to follow the path of least resistance. If the measures of success are defined to give equal acknowledgment, for example, for issuing a citation for a minor infraction as is given for addressing a complex major violation at a big facility through a lengthy judicial action, a likely result is that many citations will be issued but few complex violations will be addressed. Or, if the measures of success only acknowledge the beginning stages of the enforcement process, and do not measure and create incentives for completing those processes, it is likely that backlogs of unfinished work will accumulate.

Along with sound definitions, it is also important that realistic goals be set. A balance needs to be struck between making goals challenging for the organization and avoiding over ambitious goals which may set up the organization and its staff for failure. While success can never be guaranteed, if success in the terms defined by the management system is perceived by managers and staff to be impossible to achieve, then the management system will not be creating proper incentives and will not be well received. The potential for these types of unintended or undesired outcomes makes it important during the process of defining measures and establishing goals to bear in mind the management axiom "be careful what you ask for, you might get it."

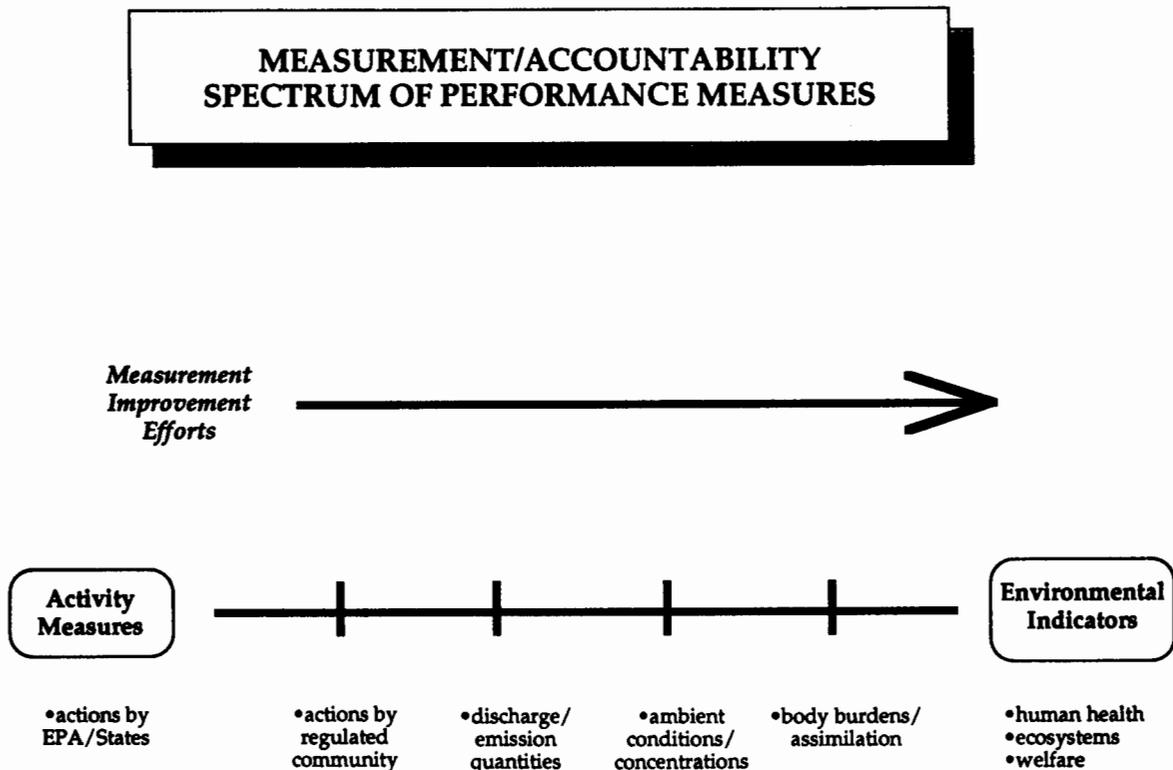
### 1.1 The measurement spectrum

Figure 1 represents the spectrum of performance measures for environmental programs. The measures on the left of the spectrum have been used for some time by EPA's management system to direct its highly decentralized media-based compliance and enforcement programs. These programs are decentralized in ten regional offices. In addition to their many compliance and enforcement tasks, the regional offices also monitor the progress of the media compliance and enforcement programs that are operated by the fifty states. Much of the monitoring of state efforts is through commitments and reporting carried out to implement the measures of success.

The spectrum ranges from relatively simple activity measures on the left to sophisticated environmental indicators on the right. Measures on the left side of the spectrum are well established in EPA. These measures include numbers of judicial and administrative enforcement actions initiated, numbers of various types of inspections, level of monetary fines, and timeliness of enforcement response. Consistent with the axiom that "what gets measured, gets done," the management system has been very successful in encouraging and rewarding the assessment of monetary fines (Figure 2), initiation of enforcement actions (Figure 3), and inspections. These measures will be discussed in greater detail below.

Moving to the right along the spectrum has proven more difficult, and progress has been slower than the agency desires. In the past, the agency has had mixed success in implementing results measures such as overall compliance rate measures and measures of the value of corrective and preventive action taken as a direct result of enforcement actions. Improved environmental quality and protection of human health are the ultimate goals of environmental programs and, therefore, are the most desired measures of success. Incremental progress in the direction of developing environmental results indicators has recently been made, and on a limited basis EPA is now able to characterize the pollution reduced or avoided through its

Figure 1.



enforcement actions. Earlier attempts by the Agency to develop measures on the right of the spectrum have been stymied by the desire to design and define the "ultimate measures." The "ultimate measures" have been elusive, being either too difficult or too expensive to measure. The new measures that are being implemented resulted from a recent effort by EPA to critically evaluate the ways that it has measured compliance and enforcement success over time, and chart a course for the future that assures that proper incentives are being created for achieving real results in protection of human health and the environment. In this evaluation, the Agency did not try to develop the "ultimate measures," rather it was determined early in the proceedings that making incremental progress would be satisfactory. Much of the earlier institutional resistance that had resulted in making no progress in developing measures to the right on the spectrum was avoided by accepting incremental progress rather than insisting on establishing the "ultimate measures."

It is useful to note that the evaluation of compliance and enforcement measures took place in conjunction with EPA's recently implemented reorganization of its compliance and enforcement operations at its headquarters in Washington, D. C. Prior to the reorganization, compliance and enforcement operations in headquarters were decentralized among five major offices that were organized solely by media, i.e., air, water, hazardous waste, pesticides, and

toxic substances. Now consolidated into one office, the reorganized structure emphasizes cross-program, multi-media approaches that look comprehensively at all facilities within particular industries (e.g., petroleum refining, iron and steel, chemical manufacturing), particular geographic areas (e.g., critical watersheds), or emissions of pollutants of concern (e.g., known or suspected carcinogens, metals). Conducting the evaluation of the measures during the reorganization was advantageous because many traditional ways of doing business were already being changed, and much of the organizational resistance to change which had existed in the old decentralized structure disappeared.

The evaluation process resulted in the implementation of new measures that move to the right along the spectrum. The new measures are intended to provide incentives for pursuing multi-media approaches, emphasize completing actions and achieving high quality environmental and programmatic results, and encourage alternative approaches to environmental protection such as compliance assistance. Reflective of EPA senior management's priorities for compliance and enforcement, measures that are now being utilized by EPA include: quantification of environmental results obtained through compliance and enforcement actions; facility and industrial sector multi-media compliance rates over time; progress in returning significant noncompliers to compliance; inspections of regulated facilities; enforcement actions; monetary fines assessed; monetary value of actions taken by regulated entities to achieve compliance; and measures of compliance assistance activities.

Each of these measures has advantages and disadvantages which will be discussed in turn below. Based on experience, it is clear within EPA that several measures need to be used to gain a meaningful and comprehensive assessment of program performance and effectiveness. No single measure can capture the breadth and depth of complex environmental programs. In developing measures several key questions need to be addressed, including: the expected accuracy of the measure; the resources that will be needed to collect and maintain the data; the frequency of data collection; who will analyze the data and to whom will they report their findings; and how will the data be stored (e.g., in a centralized computer, local computer systems, or a paper system).

Measuring the success of compliance and enforcement programs is not an easy task. Organizations and programs are dynamic entities, and new programs or regulations are always on the horizon. It is important, therefore, that the management system provide an opportunity for periodic dialogue at many levels within the organization about how success should be measured. Collecting and processing reliable information on compliance and enforcement requires long-term commitment of resources and management support. Personnel involved in gathering or analyzing data need to clearly understand exactly what data should be reported, and that this function is very important to the successful operation of the overall program. It is also important to acknowledge that different levels within the compliance and enforcement program may have different data needs. Local personnel may prefer to focus their resources on data they consider valuable for evaluating program performance. Facility specific information on inspections and compliance status is likely to be very important to them. Program personnel at a national level may have different perspectives and priorities. They may need highly aggregated data that sum the inspectional or enforcement activities from all the facilities across the nation. As a result of this hierarchy of data needs, national data systems appear to benefit significantly if they are designed to meet the day-to-day needs of the local office managers and staff. This creates an incentive for them to gather and maintain accurate data. If the data are accurate at this level, a properly designed data system will be able to aggregate national summary information for use by the central office.

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## 1.2 Results measures

### 1.2.1 Environmental results

As mentioned above, improved environmental quality is an ultimate goal of environmental programs and, therefore, measures of environmental success are highly desired. The types of environmental results that can be measured include changes in overall environmental quality, reduction of pollutant releases, and risk reduction. These measures pose several difficulties that need to be addressed. Among the issues commonly cited within EPA as obstacles to developing measures of environmental results are: a potentially significant lag time between the compliance assistance and/or enforcement response activity and the resulting improvement in environmental quality; difficulties in linking changes in environmental quality to specific sources or specific compliance actions; and factors such as changing weather patterns or economic conditions which affect environmental quality and therefore the accuracy of this measure.

The recent evaluation of the measures of success resulted in a recommendation that the Agency routinely gather and report data on actual reductions in pollutant emissions or discharge loadings that result from enforcement settlements, pollution prevention activity, and/or compliance assistance activity. Also recommended was a systematic method for collecting these data at the time enforcement cases are being concluded. Benefits of collecting the data at this time include creating greater incentive for concluding actions, and improved accuracy by gathering the data when the staff involved in the action are likely to have the greatest understanding of the environmental results to be achieved. In order to calculate emission/effluent reductions, compliance and enforcement personnel will also need to routinely document the conditions (establish the baseline) when violations are discovered. To augment the quantitative data, narrative descriptions will be routinely developed describing the environmental conditions that existed at the time that the facility was found in violation along with the results which are expected when the settlement or order is fully implemented. This data will also be gathered at the time that the case is concluded.

Measuring the environmental results of reporting and record-keeping violations has always proven to be a challenge. Now, environmental benefits attributable to the correction of violations of reporting requirements or violations that do not involve illegal discharges will also be quantified, i.e., the failure to submit required emissions reports or the failure to make proper hazardous waste determinations. To the extent possible, personnel will quantify the volume of discharge or the amount of waste subject to the requirement. Then, the success measure would be to declare that as a result of the enforcement action that brought about correction of the violation, "x" tons of emissions were now being properly regulated by the Agency or "y" barrels of hazardous were now being properly managed in accordance with the law.

Additional measures have been recommended that are intended to capture implementation of source reduction technology which describe the specific types of pollution prevention processes or activities which are utilized (e.g., input chemical substitution, process change, closed loop recycling, product reformulation, etc.) Environmental benefits can result from enforcement settlements or compliance assistance activity.

There are some examples of successful early efforts in the U.S. to measure environmental results. These have been written about previously in the proceedings of both the Budapest and Oaxaca Conferences and will not be discussed in detail here. For further information on these efforts please refer to pages 11-16 to 11-20 of the Budapest proceedings for discussion of the Clean Water Act National Municipal Policy, and pages 11-20 to 11-25 for the discussion on the Marketable Reductions of Lead in the U.S. (also known as Lead Phasedown). Please also refer

to pages 181 to 196 of the Oaxaca proceedings for the paper entitled, "The Great Lakes Enforcement Strategy: Using Enforcement Resources to Maximize Risk Reduction and Environmental Restoration in the Great Lakes Basin."

### 1.2.2 Compliance rates

Compliance rates are one of the best overall measures of enforcement success, and in an ideal world high rates of compliance are the ultimate goal of most programs. Most EPA programs are able to record and assess overall compliance rates on a macro-level. Among the issues commonly cited in discussions about developing meaningful compliance rates are: the reliability of compliance rates is dependent on the thoroughness and frequency of inspections and/or the accuracy of self reported data; 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; and a high compliance rate can be misleading if the most significant pollution sources remain out of compliance or if the sources fail to stay in compliance. Because of these issues, many U.S. programs have found it difficult to hold managers accountable for improvements in compliance rates, and some program managers have in the past vigorously opposed implementing reporting on compliance rates as a measure of success. All U.S. programs have, however, utilized some form of compliance rate to suggest specific areas requiring management attention. If compliance rates are to be used as a measure of success, the following issues need to be considered: is compliance considered to be achieved when final required emission levels are met or when a facility is meeting a schedule for compliance set forth in an enforcement agreement; should the compliance rate be calculated based on only the most significant requirements or is it based on all requirements; 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.

The recent evaluation of the measures of success resulted in a recommendation that the Agency continue to routinely gather and report data on compliance rates. In the past, the use of facility compliance rates as a method of gauging program progress and success has had mixed results. The compliance rate information that have been generated in the past have been limited in determining program success since all regulated facilities for particular media programs have been aggregated together into very large numbers (e.g., 40,000 major air sources, 8,000 major water dischargers, etc.), and uncertainties about the timeliness and completeness of information in automated data systems. From a purely mathematical perspective, it takes large numbers of facilities either entering or leaving compliance to move the compliance rate numbers in a discernible direction. If similarly large numbers of facilities go into and out of compliance, it can appear as if no change has occurred. For example, over time the air program has frequently reported overall compliance rates of 90% - 95%, however, these data do not indicate which types of sources tend to be in noncompliance, whether there are many repeat violators, and what these facilities represent in terms of contribution to overall emissions of air pollutants. As result, existing compliance rate measures have been viewed as not being very useful and have been used infrequently.

Use of compliance rates as a measure of success will be reinvigorated by both broadening and narrowing how the concept is applied. The use of compliance rates would be broadened through looking at a multi-media picture of compliance, and it would be narrowed by limiting this multi-media view to particular industries (e.g., petroleum refining, iron and steel manufacturing), high priority geographic areas, emission of pollutants of concern, and/or corporation-wide noncompliance. These are smaller slices of the total universe of regulated facilities, but the picture for these slices will be much more comprehensive. These data, which will help guide targeting and priority-setting decisions, can serve as the baseline against which

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progress and success are measured over time. For the most part, the rates that are calculated will look back at the pattern of compliance for a period of two years. This length of time should be sufficient to detect most patterns of recidivism and/or periodic noncompliance.

A key obstacle to successful implementation of compliance rates is organizational impatience. Due to the significant length of time that can pass before results in a particular area of emphasis are realized and measured, it is necessary for the organization to be patient with this approach.

### 1.2.3 Progress in returning significant noncompliers to compliance

As noted in the paper "Principles of Environmental Enforcement and Beyond: Building and Institutional Capacity" from the proceedings of the Third International Conference on Environmental Enforcement in Oaxaca, Mexico, significant noncompliers (SNC) are those noncompliers that have the greatest potential or actual impact on environmental quality. Bringing them into compliance will, therefore, have a significant impact on environmental quality. It may also have an important deterrent effect since these noncompliers are frequently large and well known sources within the regulated community. This indicator can be 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 noncompliers."

The U. S. has used variations of this measure since the late 1970's, and it is one of the country's most successful management tools. At first, U.S. program officials identified the most significant air and water pollution sources throughout the nation which had not installed the pollution control equipment that would bring them into initial compliance with the applicable statutes and proceeded to take action against them. This effort brought many large facilities into compliance. This was a finite list, however, and enforcement activity declined when the initial list was exhausted.

In the mid-1980's, the U.S. expanded use of the concept to look at the full range of environmental statutes on an ongoing, dynamic basis. National criteria have been established for each program which define what constitutes a significant noncomplier. Definitions have also been developed for the types of actions that should be taken for particular types of violations. EPA regional office and state agency personnel identify significant noncompliers in their jurisdiction and make commitments to take action to resolve the noncompliance. Sources are tracked until compliance is achieved. Performance is evaluated based on how closely these goals are met. Advantages of this approach include: it tracks results achieved, and actions and results can be easily associated; the system encourages actions that will have significant environmental benefits; and enforcement program managers can analyze the data for patterns of compliance across industry, companies, and environmental media.

While there are many similarities between the significant noncomplier definitions and measures among each of the media programs, there are also many differences. Many of these differences are easily attributable to differences in the various laws that establish the programs, however, there are many differences that are more reflective of the personalities and management styles of the individuals who were in charge of the programs at the time that the measures were developed. The significant noncomplier measures are at the heart of the management systems and day-to-day operations of the media programs. Long-term decisions that were made about how accounting for the measures functions has made program-to-program comparisons difficult without a comprehensive understanding of the nuances of each programs' methodology. Decisions about how data are gathered and tracked have impacted decisions about major acquisitions of computer hardware and software. Many of these media-specific decisions that were made in the mid-1980's have had long-term impacts on the usefulness and ease of understanding the data. They have affected whether the measures are actually guiding the

programs and are leading to programmatic and/or environmental results, or whether the measures have been mostly bean counting tools. To overcome the significant differences among the media programs in both hardware (mainframe and mini-computer) and software (five incompatible software platforms) and develop comprehensive multi-media facility and industry-specific data, EPA has had to develop very sophisticated data integration software that is capable of linking data from twelve different data systems. Even with this software, users of the data still need to have extensive knowledge of the definitional and accounting nuances for each media program.

At the time that these measures were put in place in the mid- to late-1980's, general guidance was provided on how they should be developed. The media programs were allowed to develop their individual approaches. A few key common standards were set forth to guide the development, but many decisions relating to accounting methodology and computer hardware and software were left up to the individual program managers. In retrospect, this degree of individual program flexibility would not be recommended. The different and frequently incompatible approaches that were developed by the media program offices have had major consequences for the Agency's subsequent efforts to develop and implement multi-media approaches. If the Agency had it to do over again, it is likely that the guidance would be more prescriptive about standard accounting methodologies and computer hardware and software considerations. Some individuality by the media programs would undoubtedly be necessary, but the wide differences in approaches taken do not appear to have been necessary due to the individual needs of each program.

#### 1.2.4 Monetary fines assessed

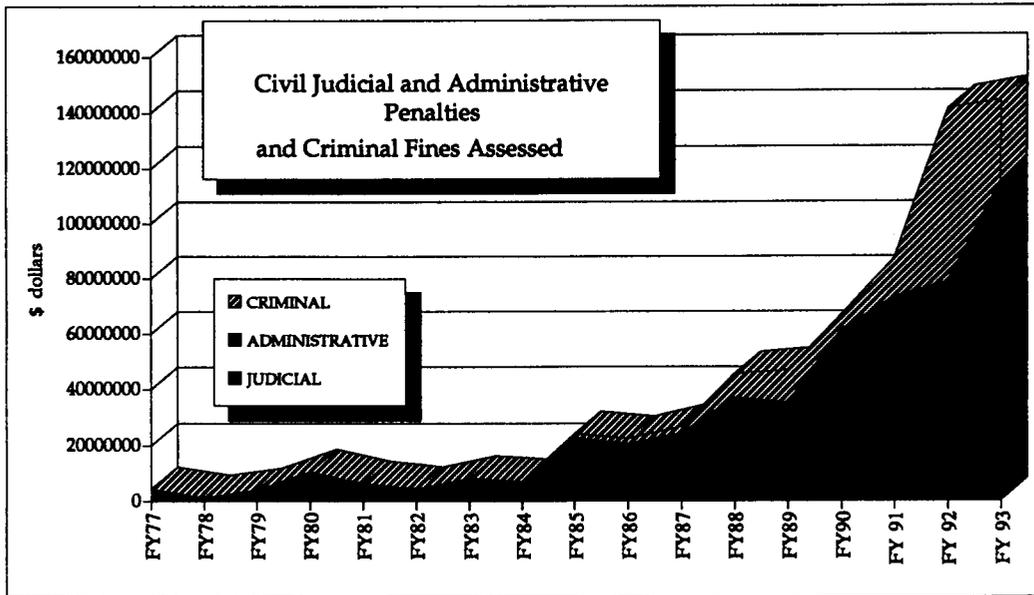
This indicator is simply the total number and/or value of penalties assessed as a result of enforcement actions. Trends in this indicator (see Figure 2) are used to measure success since it is not possible or appropriate to set goals for how many penalties should be assessed during a particular time period or how severe the penalties should be. This measure is not a good means for holding managers accountable for successful enforcement activity because there is usually a significant lag time (sometimes years) between the initiation of an enforcement action and the assessment of a monetary penalty. In the U.S., until recently, reports on the total value of monetary fines were prepared at the end of each fiscal year. With the advent of more systematic approaches to gathering data on the results of concluded enforcement actions this information will be prepared at the mid-year and end-of-year.

As Figure 2 shows, the level of fines in the U.S. has been steadily increasing. This is reflective of a number of factors. Overall, EPA's enforcement programs have been vigorously enforcing the law and initiating record numbers of civil enforcement actions. In addition, the civil penalty policies for each media program have become well established. These policies apply to both judicial and administrative enforcement cases, and fines in each of these categories have been increasing. Finally, the federal government has placed increased emphasis and resources in its criminal environmental enforcement program, and, as a result, the number of cases taken and the level of fines have been increasing. All together, in FY 1994, EPA levied over \$151 million in civil and criminal fines. The Agency ensures that these figures are well publicized, and looks to them as a key component of its effort to create deterrence.

#### 1.2.5 Nature and monetary value of injunctive relief: correcting the violation

This indicator provides information on the nature and value of the injunctive relief assessed as a result of enforcement actions. This measure provides narrative descriptions of the physical actions that are required of facilities through enforcement settlements. This measure also includes the estimated value of the cost of undertaking these actions. When viewed with information on monetary fines assessed, the enforcement program has a more complete handle

Figure 2.



on the full impact of enforcement actions. Trends in this indicator are used to measure success, but are not used for goal setting. In the U.S., reports on the nature and value of injunctive relief are prepared twice per year. Efforts to gather this data are relatively new and it is too early to know what role it will play in long-term program management and priority setting. Gathering accurate data will be a challenge due to the many complexities of estimating the cost of procurement and installation of pollution control equipment, interest costs, etc. Early indications are, however, that the value of injunctive relief may total 4 - 5 times the amount of monetary penalties.

### 1.3 Activity measures

#### 1.3.1 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 including: the number of inspections; the quantity of self-reported data received by the regulatory agency; and the quality of self-reported data received by the regulatory agency

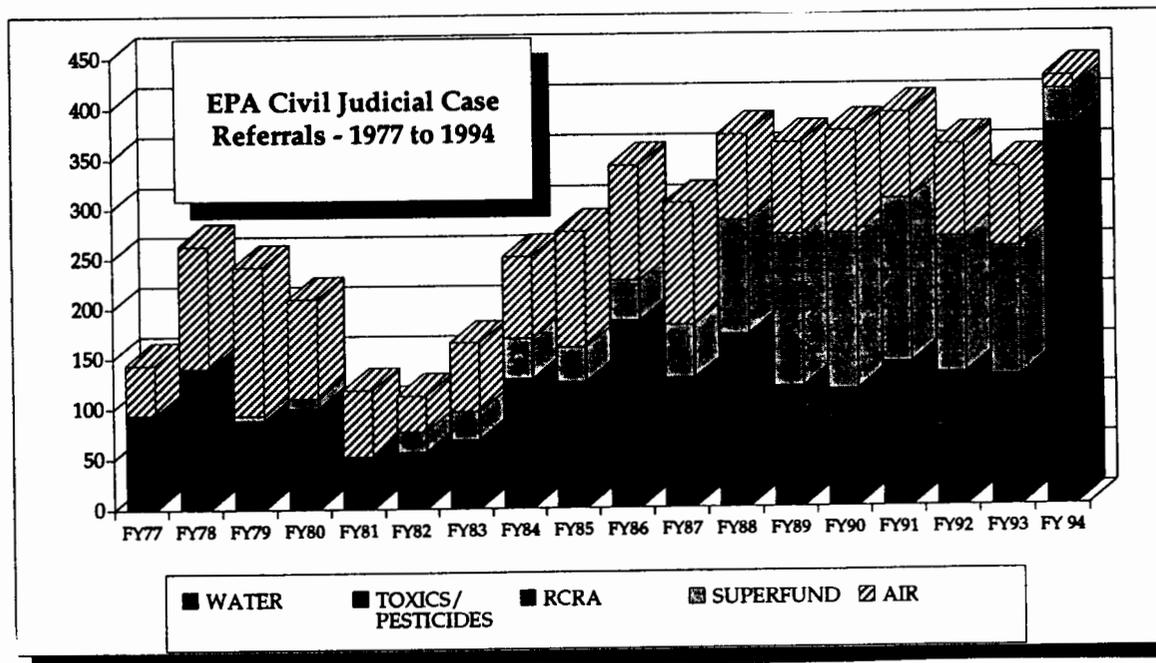
The number of inspections is probably the easiest of these indicators to track. This indicator provides a quantitative measure of program success in creating an enforcement presence. EPA uses these indicators in its enforcement programs to set goals for inspections and for reporting on progress. Policymakers develop national criteria for effective inspection strategies and program officials evaluate the strategies against these criteria. These measures are relatively straightforward and have been relatively easy to implement.

1.3.2 Number of enforcement responses

Legal action is the ultimate tool in the environmental enforcers' arsenal. Measures of enforcement responses may therefore be of particular interest to members of the public that are concerned about environmental quality. In the U.S., for example, this measure has been viewed by the public and by U.S. lawmakers as an indication of program managers' commitment to gain compliance, and it is therefore closely tracked. To use this indicator, policymakers must decide exactly what will be counted: total number of legal cases initiated (Figure 3); a breakdown of the types of cases by severity of violation, number of sites involved, multiple violations, repeat violators; the number of cases successfully concluded, etc. These indicators are not generally appropriate for goal-setting because making program managers responsible for meeting quotas for enforcement response could undermine the objectivity of the program.

Depending on the maturity of the enforcement program, more comprehensive enforcement response indicators may need to be developed that encourage an appropriate balance between the initiation of new enforcement response activities and the conclusion of already initiated matters. Activity accounting approaches that place most of their emphasis on

Figure 3.



the initiation of actions, and relatively little emphasis or incentive on bringing already initiated matters to conclusion, may result in increasing backlogs of unresolved cases and delay reaching the point in the enforcement process where environmental results are achieved.

### 1.3.3 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 return to compliance as quickly as possible. Timeliness can be evaluated by monitoring trends and by comparing actual results against predetermined goals. Timeliness can also be measured by setting goals for different types of enforcement actions. Goals can only be set for more routine types of enforcement actions that consistently take a predictable time to complete. Complex legal actions do not generally lend themselves to such goals. Also, timely response may not be possible or appropriate in some cases, such as criminal cases, that require 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 complex and time-consuming enforcement response.

In practice in the U.S., this measure has met with mixed success. Key factors that have affected implementation of these measures include relations between EPA and its state program partners, and the level of technical and legal staffing in the regional offices vis-à-vis the number of violators that need to be addressed. Tracking timeliness information has also proven to be more difficult than was expected, with the nuances of particular cases making it difficult to categorize the multitude of possible outcomes. Success against timeliness measures will always be a standard that EPA and the states aspire to, however, it remains to be seen whether timeliness in the real world is a practical standard for assessing program success.

The Clean Water Act program has probably had the most success among the various programs in implementing a timeliness measure. This success seems to be largely the result of two factors: the way that compliance status is reported in this program, and the length of time that EPA and/or the states have to make a "timely response" to the violation. Source compliance status reporting in the Clean Water program lends itself more readily to precise tracking because permitted sources must install monitoring equipment in outfall pipes that continuously monitors the amount and characteristics of the effluent being discharged to surface waters. These detailed data are sent to EPA and/or the state agency monthly. It is possible, therefore, to know with some precision when a facility has entered into noncompliance and to track the timeliness of the actions taken by EPA or the states to return it to compliance. In large part due to the timing and structure of the automated reporting in this program, the timeframe for "timely response" is set at 180 days from detection. This timeframe is from 30 - 50 days longer than for the other programs. Actual experience in the other programs suggests that the current definitions of a "timely response" may be unrealistically short and that a timeframe more on the order of that used in the Clean Water program would be more appropriate. The setting of response timeframes has been demonstrative of the importance of setting realistic, achievable goals. A balance needs to be struck between making goals challenging for the organization and avoiding overambitious goals which may set up the organization and its staff for failure.

### 1.3.4 Measures of compliance assistance activity

A key feature of EPA's reorganization is the emphasis that is being placed on compliance assistance as an alternative approach to bringing about source compliance. New measures have been proposed for compliance assistance activities conducted by headquarters or regional office staff. Reporting by states on their activities is voluntary. Activities at the federal level

include, for example, distribution of sector-based compliance assistance materials that explain environmental regulations and discuss pollution prevention opportunities through various media such as brochures, training, seminars or computer-based expert systems. Activities could also include working as part of a compact with a trade association to involve the trade association in compliance assistance for an identified industry sector. Overall compliance rates, both pre- and post-activity compliance rates, need to be measured in order to provide a meaningful context for assessing the effectiveness of compliance assistance measures efforts.

## **2 CONCLUSIONS**

When designing measures of success it is important to realistically assess program maturity and develop measures which lead the program forward to achievement of strategic goals. Measures that do not keep pace with program maturity will cause frustration and will undermine the credibility of the management system. At EPA, measures development efforts through the rest of the 1990's will be guided by three broad themes: 1) many environmental problems are not confined to a single media (air, water, or land), and more holistic, multi-media approaches are needed to protect public health and the environment; 2) management systems need to be balanced to place greater emphasis on completing actions and achieving and measuring high quality environmental and programmatic results; and 3) methods other than direct enforcement actions (e.g., compliance assistance) can be effective in bringing about facility compliance and these methods need to be measured.

In designing new measures EPA will try to follow a few simple principles: 1) design measures that are practical and relatively simple to implement in the field; 2) while some activity initiation indicators will continue to be necessary for the foreseeable future, encourage quality and completion of work by measuring the conclusion of processes where the environmental and programmatic results are obtained; 3) given the multitude of internal and external uses of the measures of success data, implementing new concepts will require an effective communications strategy about the nature and reasons for changes with others within EPA, in state agencies, the public, Congress, environmental interest groups, and the media; and 4) incremental progress along the measurement spectrum is better than making no progress at all.

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## SPECIAL TOPIC WORKSHOP G

### Communications and Enforcement

Papers and Workshop G discussions address the following issues:

- Reasons for communications about enforcement.
- Target groups for communications (e.g., politicians, enforcers, the general public, the regulated community).
- Legal problems in using enforcement information in communications.
- Special activities as enforcers to ensure effective communications (e.g., press release policies and requirements, contributions to newsletters or the trade press).
- How communication is made part of the total enforcement process.
- Means of communication available: written, video, broadcast, or other.
- The target group of your country's communications.
- How press interest is attracted on positive stories, since they seem interested in the "negative issues."

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1. Summary of Communications and Enforcement Workshop, *Facilitators: R. Glaser, J.C.M. Veenman, J. Wise, Rapporteur: J. J. van Klaveren* ..... 505
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See related papers from other International Workshop and Conference Proceedings:

*The Role of Communication in an Enforcement Program*

1. Changing Environmental Behavior in the United States Through the Use of Public Disclosure of Information, *P.G. Keough*, Volume I, Oaxaca, México
2. The Role of Communication for Implementing Enforcement Policy, *J.C.M. Veenman*, Volume I, Oaxaca, México
3. Media Challenges in Environmental Enforcement: The Case in Nigeria, *O.O. Uwejamomere*, Volume I, Oaxaca, México
4. Planning and Executing Strategic Environmental Enforcement Initiatives: Maximizing Enforcement Impact, *R. van Heuvelen, P.J. Fontaine*, Volume I, Oaxaca, México
5. Summary of Theme Discussion: The Role of Communication in an Enforcement Program, *Moderator: P. Verkerk, Rapporteur: D. Bronkema*, Volume II, Oaxaca, México

*Designing Enforceable Environmental Requirements*

6. Information Campaigns Benefit Enforcement of Environmental Laws, *J. van Ekeren and M. van der Voet*, Volume I, Budapest, Hungary

*Public Disclosure and Citizens' Role in Enforcement*

7. From Public Disclosure to Public Accountability: What Impact Will it Have on Compliance, *F. Irwin*, Volume I, Budapest, Hungary
8. Disclosure of Environmental Information and Enforcement of Environmental Law in Flanders: The Complementary Role of Governmental Authorities and NGOs, *R. de Baere*, Volume I, Budapest, Hungary
9. Use of Public Disclosure in Environmental Protection Programs to Enhance Compliance and Change Behavior in the United States, *P. Keough*, Volume I, Budapest, Hungary
10. Public Disclosure and Its Impact on Compliance, *N. Blackburn*, Volume II, Budapest, Hungary
11. Public Disclosure and Citizen's Role in Enforcement, *E. Popov*, Volume II, Budapest, Hungary

## COMMUNICATIONS AND ENFORCEMENT

Facilitators: Robert Glaser, Jan C.M. Veenman, John Wise  
Rapporteur: John J. van Klaveren

### GOALS

The following are discussion issues for the workshop:

- Reasons for communications about enforcement.
- Target groups for communications (e.g., politicians, enforcers, the general public, the regulated community).
- Legal problems in using enforcement information in communications.
- Special activities as enforcers to ensure effective communications (e.g., press release policies and requirements, contributions to newsletters or the trade press).
- How communication is made part of the total enforcement process.
- Means of communication available: written, video, broadcast, other.
- The target group of your country's communications.
- How press interest is attracted on positive stories, since they seem interested in the "negative issues".

## 1 INTRODUCTION

The workshop focuses on the relationship between enforcement and communication, both instruments in the environmental policy of the national as well as the local government.

## 2 PAPERS

1. Capacity building support document International Training Workshop: "Communication Strategies for Enforcement," (April, 1996).
2. Case description "The Harbour of Néko" and procedures for the "Communication and Enforcement Game".

## 3 DISCUSSIONSUMMARY

### 3.1 The compliance challenge

The objective of environmental policy is to direct companies and individuals toward more environmental-friendly behavior through compliance to regulations. Enforcement is one of the most powerful instruments to influence this behavior. The objective of enforcement is to achieve compliance within the regulated community.

One of the main problems for environmental enforcement is the imbalance between the huge amount of companies under regulation and the limited enforcement capacity. It is simply impossible to enforce every environmental law by inspecting each company individually on a regular bases. A more sophisticated approach of enforcement is needed

### 3.2 Communications as a compliance tool

One of the main instruments to increase the effectiveness of the enforcement is communication. The effectiveness of enforcement depends on the probability to get caught if you violate the rules. The effect this "chance to get caught" has on compliance is based on two elements: the factual chance to get caught and the perception of individuals and companies to get caught. Communication can reinforce the feeling that there is a big chance you will be caught. If the government inspects 10 out of a 100 companies, the factual chance to get inspected is 10%. But if the government communicates about the enforcement-action most likely more than 10 companies feel they run the risk to be inspected. This feeling alone can change their behaviour. This is what communication can do. It makes environmental enforcement more effective by influencing the perception of the enforcement-action.

### 3.3 Integrated use of enforcement and communication

Like enforcement, communication is an instrument of environmental policy. These two instruments are not independent of each other. If employed in the right combination they reinforce each other, but if handled separately they can do more harm than good. For communication to make enforcement more effective it is necessary to integrate these two instruments. Checking compliance without making this known to the regulated community will prove not to be a very efficient way of stimulating environmental friendly behavior. Vice versa it is in the long run not effective to constantly communicate about enforcement and threaten with compliance checks, while in fact no inspections are made. Communication by itself is not enough. In practice this means a well considered integration of enforcement and communication.

### 3.4 A strategic approach

A strategic approach for both enforcement and communication is a prerequisite for success. There must be a plan, based on a thorough analyses of the present situation and the specific environmental problem(s) at hand, the relevant target groups and the means of communication at disposal.

An important step in making a plan is the selection of target groups. Who are directly involved (for example the management and people on the work floor of the pollution company), and who are the intermediate target groups (the press and the branch-organization). You can not communicate with everybody about everything. Related to these selected target groups, objectives must be formulated. Objectives for the enforcement action (compliance targets) and objectives for the communication actions (attention, knowledge, public awareness and behavior).

### 3.5 Game-playing for training in strategic use of communications

To explore the use of communications the participants in the workshop played a game. The challenge in this game was to make the enforcement activities as effective as possible in promoting compliance by supporting the enforcement activities with communication activities with limited resources. Starting with a case description of a government that wants to reduce the environmental pollution caused by careless transhipment of scrap, the participants in the game

had to select target groups and communication actions and put them on a timeline for a six-month period in relation with enforcement actions. Acting as the Enforcement Department of the government the participants had to be clear on the kind of communication (tv, radio, newspaper, meetings, etc.) that should be put in place on behalf of the different target groups (the management of the company, the people on the work floor, the people living in the area, other companies in the area, the branch organization, the local press and media and the national press).

### 3.6 Evaluation of the workshop

After playing the game the results were evaluated. What did the participants learn from the game and how realistic and applicable was the game experience with regard to the actual practice of the participants?

The game proved to be a successful way of making clear that communication actions are an important management tool for supporting enforcement activities to realize environmental objectives. The game leads to a process of decision making in the group of participants in which the relationships are explored between communication and enforcement.

## 4 CONCLUSION

Communication objectives and target groups must be well chosen and are essential for an enforcement communication plan, as it proved to be during the workshop. The experiences made clear that it is actually possible to plan communication actions in the process of enforcement. Moreover the game proved to have an educational impact on the participants. It lead to self-evaluation of the way their own work is done at present. Communication strategies, as well as the way of execution, are, however, culturally bound and differs for each situation, perception of the problem and the view of possible enforcement approaches. A mix of communication channels or media and activities is preferable within the limits of available financial and other resources. Most of the participants became aware of the desirability to introduce more communication activities in their own work to get the results they want.

The suggestion was also made to implement the workshop on a structured bases in future programs in combination with the development of an enforcement plan, the communications-game and a role-play of the participants.



## SPECIAL TOPIC WORKSHOP H

### Public Role in Enforcement: How to Go About Creating and Supporting Effective Citizen Enforcement

Papers and Workshop H discussions address the following issues:

- The various roles that citizens may play in environmental enforcement and achievement of compliance:
  - the public role as an economic and social force for compliance;
  - the role of citizens in identifying violations;
  - the role of citizens in pursuing enforcement actions or forcing governments to pursue violators (citizen suit authorities and trends in recent environmental legislation creating environmental bill of rights); and
  - citizen roles in commenting on settlement of violations and disputes on compliance.
- How the public role can be fostered as an effective force for achieving widespread compliance.
- Mechanisms used to empower citizen enforcement: what authorities exist in different countries and how this authority has been exercised.
- Relationships that might be established between governmental agencies mandated to enforce requirements and citizens empowered to enforce the law. What are the advantages and disadvantages of different relationships.
- How dependent an effective public role is on public disclosure of compliance information.

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1.	Summary of Public Role in Enforcement Workshop, <i>Facilitators: M. Axline, J. van Dijk, Rapporteur: S. Casey-Lefkowitz</i> .....	511
2.	Environmental Enforcement and Public Advocacy in Ukraine, <i>S. Kravchenko</i> .....	515
3.	Intergenerational Responsibility in the Philippine context as a Judicial Argument for Public Action on Deforestation, <i>A. Oposa</i> .....	521
4.	Role of Public Participation in Enforcement, <i>G. Sarmiento</i> .....	527
4.	See also The Evolving Role of Citizens in Environmental Enforcement, <i>S. Casey-Lefkowitz, W.J. Futrell, J. Austin, S. Bass, Theme 4</i> .....	221

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See related papers from other International Conference and Workshop Proceedings:

1. Popular Actions and the Defense of the Environment in Colombia, *G. Sarmiento*, Volume I, Oaxaca, México
2. The Role of Citizens in Environmental Enforcement, *E. Roberts, J. Dobbins and M. Bowman*, Volume I, Budapest, Hungary
3. Citizens Role in Enforcement: a Spur, a Supplement and a Substitute, *R. Hallo*, Volume I, Budapest, Hungary
4. Citizen Participation in U.S. Environmental Enforcement, *R. Van Heuvelen and L. Breggin*, Volume I, Budapest, Hungary
5. From Public Disclosure to Public Accountability: What Impact will it have on Compliance, *F. Irwin*, Volume I, Budapest, Hungary
6. Disclosure of Environmental Information and Enforcement of Environmental Law in Flanders: The Complementary Role of Governmental Authorities and NGO's, *R. de Baare*, Volume I, Budapest, Hungary
7. Citizens' Role of Enforcement of Environmental Law in Europe, *M. Führ*, Volume II, Budapest, Hungary
8. Public Disclosure and Citizens' Role in Enforcement, *E. Popov*, Volume II, Budapest, Hungary
9. Enforcement of EEC Environmental Legislation: the Role of Citizens and Citizens' Groups, *E. Klatte*, Volume II, Budapest, Hungary
10. The Role of the Russian Public in Environmental Enforcement, *M. Brinchuk*, Volume II, Budapest, Hungary
11. The New Ecological Legislation of Russia, *R. Bogolepov*, Volume II, Budapest, Hungary
12. Summary of Theme Discussion: Public Disclosure and Citizens' Role in Enforcement, *A. DeLong*, Volume II, Budapest, Hungary
13. NGO's Role in Environmental Enforcement in Ownership Transformations in Poland 1990-1992, Opportunities and Problems, *W. Stodulski*, Volume II, Budapest, Hungary

## **PUBLIC INVOLVEMENT IN ENFORCEMENT**

Facilitators: Mike Axline, Jaap van Dijk  
Rapporteur: Susan Casey-Lefkowitz

### **GOALS**

The following are discussion issues for the workshop:

- The various roles that the public and citizens may play in environmental enforcement and achievement of compliance:
  - Public role as an economic and social force for compliance.
  - Role of citizens in identifying violations.
  - The role of citizens in pursuing enforcement actions or forcing governments to pursue violators (citizen suit authorities and trends in recent environmental legislation creating environmental bill of rights).
  - Citizen roles in commenting on settlement of violations and disputes on compliance.
- How the public role can be fostered as an effective force for achieving widespread compliance.
- Mechanisms used to empower citizen enforcement: what authorities exist in different countries and how this authority has been exercised.
- Relationships that might be established between governmental agencies mandated to enforce requirements and citizens empowered to enforce the law. What are the advantages and disadvantages of different relationships.
- How dependent an effective public role is on public disclosure of compliance information.

## **1 INTRODUCTION**

There were two workshops during the conference on the topic of how citizens can be involved in enforcement. Both groups had mixed nongovernmental and governmental participation. Although the flavor of the discussion differed greatly in each workshop, both groups reached certain common understandings of public involvement in environmental enforcement. The groups agreed that citizen enforcement should supplement governmental enforcement and be used to ensure governmental compliance with environmental laws. Both sessions focused on the conditions which facilitate citizen participation, such as access to information, independent judiciary, public awareness of enforcement needs, and a public right to enforce. In addition, the groups discussed how public enforcement takes place, including citizen monitoring of compliance, citizen complaint systems, and citizen enforcement lawsuits.

## **2 PAPERS**

Two papers were written on this topic. From Columbia, Mr. German Sarmiento wrote an article on the importance of public participation in enforcement listing judicial mechanisms available to the public in Columbia and stressing the importance of public access to information as an essential condition necessary to use judicial tools. Another paper was written by the Environmental Law Institute about the evolving role of citizens in environmental enforcement outlining common strategies for public participation, new options for transboundary public participation, and examples of how international networking and cooperation is building capacity and infrastructures in the nongovernmental community.

## **3 DISCUSSION**

### **3.1 Conditions to facilitate citizen involvement**

Participants established certain basic prerequisites for public involvement in environmental enforcement to be meaningful. These included a clear legal framework for environmental requirements, a transparent and accountable government, and an independent judiciary. The group also discussed the necessity to have clearly established rights, such as freedom of expression, freedom of press, access to information, and access to the courts. Finally, participants discussed the need for capacity among citizens to handle independent technical monitoring and assessment of environmental findings.

### **3.2 How to accomplish citizen involvement**

Participants also discussed how to provide avenues for citizen involvement in environmental enforcement in practice. Citizen participation in policymaking was named as an initial method to involve the public in priority-setting and development of enforcement and compliance programs. Participants also gave examples of situations where citizens could supplement government inspectors to monitor compliance with environment regulation. Most participants also had examples of citizen complaint systems, which gave citizens an avenue for reporting alleged violations of the law or threats to the environment or human health. Many participants also mentioned education of the public as an important element of public involvement in enforcement. Finally, participants discussed citizen enforcement lawsuits which could be brought against the government to force it to carry out its enforcement duties, or against a violator to force it to obey the law.

## **4 CONCLUSIONS**

The discussion of one group led to a list of recommendations concerning public involvement in environmental enforcement.

- The public should have the right to a healthy environment.
- The public should have the right to enforce environmental law against any violator (including the government).

- The public should have the right to require the government to carry out its mandatory enforcement duties.
- Government should provide mechanisms for the public to enforce these rights in court.
- Government should build awareness among the public concerning environmental policies, enforcement needs, and the role citizens can play.
- Government should provide support and opportunity for the public to monitor environmental problems and to communicate those observations to the government.
- The public should have timely and affordable access to information necessary for enforcement efforts, including current environmental monitoring data.
- Government should provide financial incentives for citizen enforcement and remove barriers to citizen enforcement.



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## ENVIRONMENTAL ENFORCEMENT AND PUBLIC ADVOCACY IN UKRAINE

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### SUMMARY

Brief characteristics of the environmental situation in Ukraine are given. An overview of existing environmental legislation in Ukraine, the reasons for its ineffective realization, and enforcement mechanisms are described. The role environmental public advocacy plays in enforcement, and the experiences of the Environmental Public Advocacy Center in Lviv are analyzed.

### 1 ENVIRONMENTAL SITUATION

The present environmental situation in Ukraine is dangerous and grave. The Parliament of Ukraine declared the whole territory of the country an extraordinary environmental situation zone.

Ukraine, which occupied 27 % of the former Soviet Union territory, produced 20 % of its national product and received a quarter of its industrial pollution. The Ukrainian economy was formed with total disregard for the objective welfare of the Ukrainian people. The result is the formation of one of the most polluted economies in the world, over saturated by chemical, metallurgical and mining production facilities utilizing obsolete technologies.<sup>1</sup>

Every year 20 million tons of industrial waste goes into the atmosphere. More than 1 billion cubic meters of harmful substances are ejected into the rivers. Seventeen billion tons of solid wastes are accumulated in the dumps, which continue to grow to more than 1 billion tons annually. Nonrenewable mineral raw stock resources are being exhausted. Soil, water, and atmospheric air gets intensively polluted.

118 million hectares of black soil have been eroded. Such erosion has never previously occurred in the 5 thousand year history of Ukrainian agriculture. Thousands of rivers have perished. The Black Sea and the Sea of Asov suffer degradation due to water pollution. The Carpathian mountains have lost half their forests as a result of intensive cutting for economic purposes. There is a water deficiency in a number of cities. Industrial atmospheric pollution exceeds environmental quality standards up to 10 times.

Unfortunately, Ukrainian's lack of forests, along with a developed metallurgy and thermal power industry, make it one of the countries that burn the planet's oxygen. In 1986-1991, more than 100 million tons of harmful substances were emitted into the air. The main pollution sources are power industries, facilities, metallurgy, coal and chemical industry as well as motor transportation.

In the agricultural arena, an excessive and uncontrolled use of pesticides and fertilizers under the conditions of low technological culture has resulted in an accelerated degradation of soils and an accumulation of many harmful substances in the food chain. Lands have also been polluted with heavy metals and other components of industrial emissions.

In the former Soviet Union concentrated centers of industrial production were established, especially in Donbass and Dnieperside, which have resulted in one of the highest levels of environmental pollution in Europe. In the cities of Zaporizhzhja and Mariupol, contamination has reached such a harmful level. If it remains unchecked, it will unavoidably result in the physical and intellectual degeneracy of the local population. The incidence of pathologic changes in the blood of the population of this region is three times higher than average for Ukraine.<sup>2</sup>

The unfavorable economic and ecological situation which has formed in Ukraine in recent years has adversely affected population growth. Today in Ukraine, the average life expectancy is 71 years, putting it in the 53rd place among countries of the world.

Infant mortality in the first year of life is three times higher than in Japan and two times higher than that of other developed countries. In 1989, the natural increase of the population in Ukraine was 1.7 men per population of 1000, but in 1991 this rate decreased to 0.7 per 1000.<sup>3</sup> An essential factor in this decline is the unfavorable state of the environment, aggravated by the consequences of the Chernobyl catastrophe.

The accident in Chernobyl in 1986, the first really global environmental catastrophe, has become a great tragedy for the Ukrainian people. According to official statistics, approximately 200 thousand people and more than 2,000 settlements were moved from the contaminated zone.

2.8 million people, including more than half a million children under the age of 14, are now living in areas contaminated by the Chernobyl catastrophe. Particularly alarming is the fact that 150 thousand people, including children, received radiation poisoning to the thyroid, which exceeded the permissible limit. Today the Ukrainian list of Chernobyl's victims consists of 405,576 persons, in addition to 36,000 persons who are on the military-medical list of The Ministry of Internal Affairs and Security Service of Ukraine.<sup>4</sup>

Diseases of the respiratory and digestive systems, as well as the endocrine and blood circulation systems, account for a significant percentage of the mortality rates of children living in contaminated zones. Experts now consider that the Chernobyl disaster has created a new epidemic, called Chernobyl AICD. All children of the Chernobyl zone have reduced immune system.

## **2 ENVIRONMENTAL LEGISLATION**

Environmental legislation plays an important role in the improvement of the environment. Since Ukraine became a sovereign state, the regulation of all questions dealing with environmental protection was transferred to Ukraine. The Parliament and Ministry of Environmental Protection of Ukraine (established in 1991) prepared the Conception of National Environmental Legislation Development. The system of environmental legislation was created and cardinal renewed in 1991-1996 years.

The Parliament has adopted a Law on Protection of the Natural Environment (1991), a Land Code (1992), Forest Code (1994), Water Code (1995), Code of Entrails (1994), Law on the Animal World (1993), Law on the Protection of Atmospheric Air (1992), Law on Nature, The Heritage Fund (1992), Law on Environmental Examination (1995), Law on the Sanitary and Epidemiological Prosperity of Population (1993) as well as other laws and regulations.

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The Law on Protection of the Natural Environment is the main, basic act. It consists of many really new principles and rules. Environmental protection, rational usage of natural resources, and the safeguarding of environmental security for human activity are regarded to be general conditions of sustainable economic and social development in Ukraine.

The law declares the priority of environmental security requirements and the compulsory observance of environmental standards and limits, while realizing economic, executive, legislative and other activities. Until now, economic purposes have had priority. Very often economic problems were solved through methods which damaged nature. The law consolidates the validity of concordance between environmental, economic and social interests.

## 2.1 Economic instruments

The law fixes payment for environmental pollution and usage of natural resources as well as compensation for damages inflicted by a breach of environmental legislation. The law grants tax privileges for enterprises, organizations and citizens measures of environmental protection. Privilege credits are also given to environmental measures realization.

The aim of these principles is the perfection of economic mechanisms of environmental protection and natural resources use optimization. The combination of stimulation and responsibility methods should promote a concordance between environment and development.

## 2.2 Public role

For the first time, the Law on Protection of the Natural Environment confirms the right of citizens to a safe human life and healthy environment, and a compensation for damages inflicted on them and/or their property by environmental transgressions.

This right is guaranteed by public participation in decision making and by citizens' right to get true information about the state of the environment. Citizens have got the right to know how proposed industrial projects would impact the environment, and the health of the population. They also have the right to participate in environmental impact assessments, state environmental examinations, and to organize independent public environmental examinations. The law confirms the court's defense of the right to a safe environment for life and health.

## 2.3 Sanctions

The law prohibits putting into operation enterprises, constructions and other facilities which do not meet environmental standards. The activity of enterprises which breach environmental legislation can be temporarily stopped and canceled by the Cabinet of Ministers or by the Environmental Protection Ministry, regardless of the form of the property.

## 2.4 Standards

Environmental standards regulate the protection of vegetation, the use of mineral fertilizers and toxic substances, and the location and development of military facilities.

It is for the first time that law is defined and given for environmental catastrophes and extraordinary environmental situation zones. The law introduces a procedure for declaration and legal regime of such zones. More detailed regulation of legal status of these zones is foreseen in a separate law. The draft of this law is currently under work.

## 2.5 Potential violators

The Law on Protection of the Natural Environment envisages administrative, criminal, civil and disciplinary responsibility for the following transgressions:

- Breach of an individual's right to a safe life and healthy environment.
- Breach of environmental safety.
- Breach of environmental limits and standards.
- Special usage of natural resources without permits.
- Violation of fulfillment of state environmental examination requirements.
- Neglecting to execute an order of state environmental control bodies.
- Breach of environmental requirements regarding the keeping, transportation, usage and utilization of mineral fertilizers, toxic and radioactive substances, industrial and communal wastes.
- Breach of the requirements of natural heritage areas.
- Neglecting to provide full and trustworthy information about an environmental situation.
- Falsification of, or holding back, any information about the state of the environment and diseases of the population, etc.

## 3 EFFECTIVENESS OF ENVIRONMENTAL ENFORCEMENT

Ukrainian legislation in the sphere of environmental protection contains also many other significant and vital principles and rules. However, the citizens and decision makers frequently break environmental laws. There are many reasons for this. Let us analyze the main reasons for the low effectiveness of environmental enforcement in Ukraine.

### 3.1 Economic situation.

The present economic situation in Ukraine could be characterized as an economic crisis. The financing of environmental protection measures, which up until now was insufficient, was reduced this year to 0.2 % of the gross national product of Ukraine. This is in stark contrast to the USA, which spends between 4 and 5% of gross national product (GNP).

Environmental protection measures are not profitable because they are expensive and do not provide quick revenue. Ukraine needs big investments for the reconstruction of one of the most "dirty" economies and for changing obsolete technologies.

Implementation of radical rules, which have been defined by new legislation, about payment for pollution of the environment or compensation for the damages inflicted by environmental transgressions, is impossible because many polluting enterprises have gone bankrupt.

### 3.2 Environmental consciousness

Social-legal studies show a low level of environmental and legal consciousness and culture of the population of Ukraine. Eighty-eight percent of respondents do not know of environmental legislation at all. Moreover, they do not respect it. Decision makers very often

ignore environmental laws because they do not understand the importance and priority of environmental problems or do not have the economic possibilities for environmental law compliance.

Even professional lawyers (judges, prosecutors, attorneys) do not have excellent knowledge of new environmental legislation because of its novelty and complication. For instance, court practice in the protection of the environmental rights of citizens is only now being formulated in Ukraine because citizens very often do not know about the possibility of suing for compensation for damages inflicted by environmental transgressions. If they know, they do not trust that it is a reality.

### 3.3 Enforcement mechanisms

Now there are many state bodies which control the state of the environment and environmental legislation compliance. The most important of these is the Ministry of Environmental Protection and Nuclear Safety, and its regional bodies. A few Ministries deal with protection of different natural resources, such as water, forests, soil, minerals and others. These ministries control the protection and usage of the resources according to current legislation. The Cabinet of Ministers and local government also have authority to enforce compliance with environmental legislation.

However, the Inspectorate of the Environmental Protection Ministry consists of 850 inspectors for 100,000 industrial and other enterprises. It is insufficient. It is capable of controlling only 20-25 % of natural resource users and polluters<sup>5</sup>. Effectiveness of control activity could be improved through development of financial and technical support of this Inspectorate.

The Prosecutor General and its regional bodies carry out prosecutorial supervision for environmental compliance. Special Departments for the supervision of environmental legislation compliance were created a few years ago.

The court system includes civil and criminal as well as arbitration courts. All of them deal with environmental enforcement. However, they usually defend state interests in the sphere of environmental protection on cases regarding such issues as illegal cutting of timber, illegal hunting or fishing, and pollution of the environment. There is almost no practice in court regarding the protection of environmental rights of citizens.

These kinds of cases are rather new and difficult. Especially in cases with requests for compensation of damages inflicted on health and property by environmental transgressions, a judge must prove causation between the fact of the pollution of the environment and damages, in order to calculate the compensation. This requires special expert knowledge.

Citizens, as a rule, do not know how to collect evidence, or how to sue through the court system. Attorneys or lawyers who specialize in the sphere of environmental law are usually absent; however, special environmental law firms are beginning to appear now in Ukraine (CEELI) program.

## 4 THE ROLE OF ENVIRONMENTAL PUBLIC ADVOCACY IN ENFORCEMENT

The first environmental law firm, "EcoPravo", was organized in Kyiv in 1992. Following this, the charitable foundation, "EcoPravo-Lviv", was founded in 1993. In 1994 a similar organization appeared in Kharkiv. The first Environmental Public Advocacy Center in Ukraine was organized in 1994 on the foundation of EcoPravo-Lviv. It is a pilot joint project with The American Bar Association's Central and East European Law Initiative.

The Environmental Public Advocacy Center, as well as other "EcoPravo" non-governmental organizations, provide the following free of charge services:

- Consultations on environmental law issues.
- Representation of citizens' and non-governmental organizations (NGO) interests in state and prosecutor bodies as well as in the courts.
- Organizing training programs on environmental law and enforcement issues for environmental NGOs, professional lawyers such as judges, prosecutors, attorneys and others.
- Developing a network of environmental lawyers interested in environmental law and public advocacy throughout Ukraine.
- Creating a data base of environmental legislation of Ukraine and other countries.
- Providing accurate information on environmental and legal issues.
- Taking part in the drafting of new environmental laws and regulations in Ukraine.

It must be noted that the Center works closely with the Law Faculty at Lviv State University. Students are involved in the EPAC clinical program. It supports the growth of a new generation of environmental lawyers and provides a practical education with a high level of professionalism in the public interest and an equally high level of environmental consciousness.

The Center increases the awareness of lawyers and judges about environmental issues and environmental enforcement. The center raises the level of environmental and legal culture of citizens and NGOs, and their readiness to use legal tools in environmental protection and protection of citizens' environmental rights. The activity of Center also raises the level of responsibility of governmental administrators, increases the transparency of governmental actions and governmental provisions and thus access to environmental information.

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4. National Report About the State of Environment in Ukraine in 1993. Kyiv. 1994 (in Ukrainian).
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## INTERGENERATIONAL RESPONSIBILITY IN THE PHILIPPINE CONTEXT AS A JUDICIAL ARGUMENT FOR PUBLIC ACTION ON DEFORESTATION

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### 1 INTRODUCTION

One of the basic principles stated and reiterated in the Agenda 21 is the concept of 'inter-generational responsibility.' It states that:

*"Man ... bears a solemn responsibility to protect and improve the environment for present and future generations."*<sup>1</sup>

Essentially, the principle means that we hold the natural resource treasures of the earth in trust for the benefit, enjoyment and use of the generations of humankind yet to come. It is therefore a trust endowed upon us — as trustee and depository — to use and enjoy. While our generation has the right to use the earth's resources, as a trustee and depository, we are also duty bound not to misuse or exhaust it, so that those of our species to come in much later years will still have something to use. This, in simple terms is the meaning of "sustainable development", using natural resources without exhausting them.

The time frame is not limited to nor extending only until the generation of our children and of our children's children. Rather, it extends up to a horizon of reasonable perpetuity, i.e. up to the time when the species homo sapiens is still around and that they will still need the life-support systems of the natural resource treasures of the earth.

This concept was tested in the legal forum in the Philippines. On July 30, 1993, one year after the Earth Summit that produced Agenda 21, the Philippine Supreme Court had the occasion to rule on the legal standing of children to sue before a court of law on a question of nationwide significance — the issue of deforestation.

### 2 GEOGRAPHIC CONDITIONS

The Philippines is an archipelagic country of 7100 islands with a total land area of 30 million hectares. Being an island ecology and given the slope and terrain of our islands, the proper land use balance should be about 50-50, i.e. 50% for forest lands and 50% for other land uses.

Lest we forget, the laws of man must follow the laws of nature.

It is estimated that approximately 50 years ago, the country had about 16 million hectares of old-growth forest covering 53% of the land mass.

In 1988, it was determined through satellite imagery that the country had approximately 800,000 hectares of old growth forests left and about 3-4 million hectares of residual and/or logged-over forests.

### 3 POLICY ADVOCACY THROUGH LEGAL ACTION

The Philippine mahogany was once famous worldwide. They were extracted from the virgin forests of the Philippines. Because these forests were once lush and almost limitless, it was the governmental policy to allow logging only in our virgin forests.

To recall, there were only 800,000 hectares left. In 1989, data from the Government<sup>2</sup> revealed that there were 92 logging corporations holding Timber License Agreements (TLA's) covering an area of 3.9 million hectares. There was even evidence that certain logging companies did not have forested areas within their logging concessions. Something was wrong with the arithmetic. It was estimated that about 100,000 hectares of old-growth forests were destroyed every year. Thus, on its very face, total removal of the virgin forest cover may happen in less than 10 years.

If one were to seek a change in the policy, and the law was the only tool on hand, the avenue for attempt, however modest, would be through a legal action. How to frame the problem into a justiciable and litigable issue was the challenge.

### 4 STRATEGIC AND TACTICAL CONSIDERATIONS

#### 4.1 Choice of the parties:

##### 4.1.1 Plaintiff:

While the present generation was and will continue to suffer the ecological malfunctioning as a result of forest destruction, it is the generation of our children and those to follow that will suffer what in legal parlance is called irreversible damage and irreparable injury. Under the rules on procedure, they are the real parties in interest.

##### 4.1.2 Defendant: Who should be the defendant/s?

The necessary defendants are:

- a. The holders of the license.
- b. The issuer of the license.

To unnecessarily pick a fight with 92 multimillion logging companies, with their battery of topnotch lawyers and their massive political clout, may not be an act of heroism but of foolhardy quixotism.

The art of war teaches us to choose the line of least resistance. Thus, the issuer, the Government, was the easier target.<sup>3</sup> Besides, under the Regalian doctrine, Government (representing the State) is the owner of the country's natural resources. Being the owner and possessor of authority, Government is also bestowed with responsibility. As the temporal representative of this generation, Government is duty bound to care for the natural resources of the Philippines and to keep it in good, if not in a better, condition for the benefit of the present and future generations of Filipinos.

In fact this line of thinking was already present in our existing environmental laws. An environmental provision had even been recently enshrined in the 1987 Constitution.

#### 4.2 Choice of the action:

A cause of action in an environmental legal action with a policy (a.k.a. political) complexion must not only be sufficient, it must also appear sufficient, clear, unmistakable, and palpable. Otherwise, it can suffer the setback of early dismissal for failing to state a cause of action.

The clear and unmistakable cause of action was in the fact that:

- There were only 800,000 hectares left of virgin forests.
- The Government had granted logging concessions to 3.9 million hectares (almost five times more than was available).
- At the present rate of forest depletion, there will be nothing left for our children and those of them to follow.
- If the generations to follow will suffer irreparable injury and permanent damage, they are therefore the proper parties-plaintiff.

### 5 THE LEGAL ACTION

On March 20, 1990, (two years before Agenda 21) Civil Case No. 90-777 for mandatory injunction was initiated before the Regional Trial Court of Makati, Metro Manila. The plaintiffs, forty three children from all over the Philippines filed a legal action against the Secretary of the Department of Environment and Natural Resources (DENR) and prayed for the cancellation of all logging concessions in the country. The legal and philosophical basis are as follows.

#### 5.1. Constitution:

The 1987 Constitution states that, *"The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature"* (Article 2, Section 16).

#### 5.2 Common Law:

This generation, represented by the Government, is the trustee of the natural resource treasures of the country. As such, it must properly care for these treasures so that succeeding generations — the beneficiary — may still enjoy, use and benefit from these resources until and up to an horizon of reasonable perpetuity. The Trustier, of course, is the Creator of Nature.

#### 5.3 Civil Law:

Whoever does damage to another in a manner that is contrary to morals and public policy shall be liable for the damage done. Public policy is contained in the Constitution and in the various dormant environment laws of the country. All of them state, in effect, that we hold these natural resources for the benefit of future generations. If this public policy is violated by our act of willful and continued forest depletion, there is actionable damage.

#### 5.4 Natural law:

Plaintiff minors alleged that the act of allowing the total decimation of the forest resources of the country violated their right (and instinct) of self-preservation and self-perpetuation. It is an act tantamount to generational genocide.

### 6 THE INITIAL SETBACK

The Government, as anticipated, filed a motion to dismiss on the ground of the failure to state a cause of action, and that the issue was political in complexion. After about one year, the Regional Trial Court dismissed the case on the following grounds:

1. Failure to state a cause of action on the part of the plaintiffs and lack of personality to sue.
2. The issue is a political question and therefore, non-justiciable.
3. Canceling the timber license agreements will violate the constitutional protection against infringement of contracts.

### 7 THE SUPREME COURT DECISION

The Supreme Court of the Philippines rendered an en banc and unanimous decision on July 30, 1993.<sup>4</sup> The following legal issues and clarifications may be of interest:

#### 7.1 Class suit

*"The subject matter of the complaint is of common and general interest not just to several, but to all the citizens of the Philippines. Since the parties are so numerous, it is impossible to bring them all before the court."*

The case was ruled as a proper class suit. It was also ruled that the petitioners are numerous and representative enough to ensure full protection of all the concerned interests.<sup>5</sup>

#### 7.2 Legal personality to sue:

The Supreme Court clarified the question of the children's legal right of action, their *locus standi*. It said:

*"Petitioners minors assert that they represent their generation as well as generations yet unborn. We find no difficulty in ruling that they can, for themselves, for others of their generation and for the succeeding generations, file a class suit."*

*"Their personality to sue in behalf of the succeeding generations can only be based on the concept of inter-generational responsibility insofar as the right to a balanced and healthful ecology is concerned. Such a right considers the "rhythm and harmony of Nature."*

*"Nature means the created world in its entirety. Such rhythm and harmony indispensably include, inter alia, the judicious disposition of the natural resources to the end that their development be equitably accessible to the present as well as future generations."*

*"Needless to say, every generation has a responsibility to the next to preserve that rhythm and harmony for the full enjoyment of a balanced and healthful ecology."*

*"Put a little differently, the minors' assertion of their right to a sound environment constitutes, at the same time, the performance of their obligation to ensure the protection of that right for the generations to come."*

The Court also clarified the legal status of the right to a sound environment. It noted that:

*"While the right to a balanced ecology is found under the Declaration of Principles and State Policies and not under the Bill of Rights, it does not follow that it is less important than any of the civil and political rights enumerated in the latter."*

*"Such right belongs to a different category of right altogether for it concerns nothing less than self-preservation and self-perpetuation the advancement of which may be said to predate all governments and constitutions."*

*"As a matter of fact, these basic rights need not even be written in the Constitution for they are assumed to exist from the inception of humankind."*

*"If they are now explicitly mentioned in the fundamental charter, it is because of the well-founded fear of its framers that unless the rights are mandated by the Constitution itself, the day would not be too far when all else would be lost not only for the present generation, but also for those to come —"*

*"Generations which stand to inherit nothing but parched earth incapable of sustaining life."*

## **8 POST FACTO INCIDENTS**

The Government has since prohibited logging in old growth forests.<sup>6</sup> The number of Timber License Agreement (TLA) holders has since been reduced to about 24. In effect, what was sought to be achieved by protracted legal action was accomplished, at least partially, by administrative action. This is not to say that the legal action was principally or even significantly responsible for this development. If at all contributory, it served to merely stoke the fire of concern over our vanishing forest resources.

## **9 LESSONS LEARNED**

For all its jurisprudential value and implications in constitutional and political law, remedial law and environmental law, the important lesson learned is that environmental controversies and issues are not resolved by legal action and in the legal forum. After a 3-year battle all the way to the Supreme Court, only the legalistic issue of the legal personality to sue had been resolved. If a proactive environmental legal action can be of any value at all, it is in the fact that it serves to:

1. Force the issue and disturb the molecules of thought not only in the minds of the concerned sectors (Government, logging operators, legislators, etc.), but also the minds of the general public.
2. Oftentimes an environmental issue becomes a highly-charged emotional controversy. Submitting it before a court of law will render it *sub judice* and subject the controversy to the court's dispassionate scrutiny. The issues can be clarified in an orderly manner.
3. Given a sympathetic bureaucracy, the government administrators may just be looking for additional ammunition with which they can enact a policy that they wanted to do in the first place but could not on account of political considerations and sensitivities.

## 10 CONCLUSION

So far we have discussed a legal precedent on the issue of inter-generational responsibility. What are the possible theoretical extensions of the principle?

1. If a generation is fully aware of its destructive behavior in such environmental concerns as climate change, deforestation, and marine resource depletion, yet continues to follow such conduct, is there malice and bad faith?

If so, is the next generation entitled to inter-generational moral damages?

2. If a generation converts and misappropriates for its own use and benefit the natural resource treasures which it holds in trust for succeeding generations — the beneficiaries — can the former be held for, and is there a crime of, generational swindling? The answers to these we shall leave to future jurisprudence.

## REFERENCES

1. Stockholm Declaration, Principle No. 1, and the Rio Declaration, Principle 3.
2. The agency of Government primarily mandated to protect the country's natural resources in the Department of Environment and Natural Resources (DENR).
3. To the credit of then DENR Secretary, F.S. Factoran, his administration was of similar thinking. In fact, he was informed beforehand of the legal action which he gamely encouraged and supported.
4. *Minors vs. Secretary of the DENR*, GR 101083, 224 SCRA 792. All quotations hereinafter cited may be found in the decision.
5. The plaintiffs-children were carefully selected to come from all the geographic regions of the country.
6. DENR Dept. Admin. Order No. 24, Series of 1991.
7. It is a universal principle of law that when one knows that something is wrong yet goes ahead and does it, there is premediated malice and evident bad faith.

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## **ROLE OF PUBLIC PARTICIPATION IN ENFORCEMENT**

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### **SUMMARY**

Public participation is prerequisite of enforcement even in the countries where citizens do not have standing to use either judicial or administrative mechanisms. In countries where such standing is granted, public participation replaces government authorities in the cases where they do not have political will to enforce environmental laws.

In general, environmental authorities do not move unless public request it specifically if violations come from government activities, government corruption or from private activities that are relevant in national or local economies.

In order to overcome such lack of political will, several countries have opened standing to citizens to defend environment either through judicial or administrative procedures. Citizens may activate judicial mechanisms to obtain injunctions, sanctions or compensations. Also they may intervene in administrative procedures addressed either to grant or cancel licenses.

### **1 PUBLIC ENFORCEMENT IN LATIN AMERICA**

In Latin America, Brazil and Colombia are countries that have gone further in such a trend. Other countries are beginning. In 1991, Colombia enacted a new Constitution that has been named the "green constitution", because of the extensive protection to the environment as a collective right. Such protection has been insured through different judicial mechanisms that may be used by citizens, communities and non-government organizations on the ground of a very broad standing to access the Courts.

### **2 JUDICIAL MECHANISMS**

Those mechanisms are:

- Popular actions, which is a very close tool to the citizen action of the U.S. law;
- Tutela actions, basically addressed to protect fundamental rights but interpreted by the Courts as means to protect environment when violations also affect fundamental rights such as life or health;
- Compliance actions, to enforce laws and regulations that government officers are reluctant to enforce; and
- Nullification actions, that allow citizens to nullify licenses and permits issued without complying with the laws or the Constitution.

Standing is very broad. Tutela action is only limited to the fact that plaintiff belongs to the group of people affected by the violations.

### **3 REMEDIES**

Powerful remedies may be obtained by citizens through the listed mechanisms. Popular action allows compensation for national resource damages on behalf of the government. They also allow injunctions to be obtained. Successful plaintiffs are awarded with a special compensation as well as legal fees. Tutela action allows only injunctions; no legal fees are granted. Compliance action allows to obtain injunctions against authorities that do not want to enforce environmental laws.

### **4 PUBLIC PARTICIPATION**

As a complementary mechanism, citizens may intervene in administrative procedures addressed to grant or cancel licenses. They may participate in public hearings in order to make comments on the environmental impact studies.

### **5 ACCESS TO INFORMATION**

As an essential condition to use the above judicial tools, citizens have access to any environmental information. After request, the government officers have 15 days to release it. If it is not, citizens may insist and then the request must be submitted to the court that must decide if the information is or not reserved.

### **6 CONCLUSIONS**

The Environmental Law Institute (ELI, US) has published data showing that the enforcement activity by US citizens is bigger than the U.S. Environmental Protection Agency (EPA). In Colombia it is not true yet as those mechanisms are new and the civil society is just starting to be organized to use them. The true fact is that citizens have become a new actor in the solution of environmental conflicts. It does not depend any more on government and violators. Victims and affected communities have a substantive role.

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## SPECIAL TOPIC WORKSHOP I

### Criminal Enforcement: INTERPOL, Role of Criminal Enforcement in Environmental Enforcement

Papers and Workshop I discussions address the following issues:

- Sanctions and other consequences available through criminal enforcement and how effective they are in achieving compliance.
- The proper role of criminal authorities and sanctions in environmental enforcement. What the relationship should be between criminal and civil enforcement and for what types of violations criminal enforcement (rather than civil enforcement) is particularly well suited.
- Government entities involved in making criminal enforcement successful: How these different groups can be encouraged to work together.
- Training required to support criminal enforcement, and training materials available.
- How INTERPOL works. Cooperative efforts among countries to prevent, detect, and prosecute crimes. What works well and what does not work well. What improvements can be made.

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1.	Summary of Criminal Enforcement Workshop, <i>Facilitators: T. Bispham, J. van Doom, Rapporteurs: J. Gras, L. Sievers</i> .....	531
2.	The Environmental Task of the Police: 1990-1994, <i>L.J. Sievers, M. J. Horstman</i> .....	535
3.	The Environmental Task of the Police: 1995-1998, <i>L.J. Sievers, M. J. Horstman</i> .....	547
4.	Environmental Duties of the Police in the Netherlands, <i>L.J. Sievers</i> .....	559
5.	Oregon's Experience in Developing and Implementing a State Environmental Crimes Program, <i>T. Bispham, H. Duncan, L. Carlough</i> , .....	565
6.	Targeting and Criminal Enforcement, <i>A. de Lange</i> .....	577
7.	The Environmental Criminal Justice in China, <i>S. Wang</i> .....	583
8.	The Netherland's Manual: Investigations of Complex Environmental Offenses, <i>C. van Kooten</i> .....	591

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See related papers from other International Workshop and Conference Proceedings:

1. Criminal Enforcement Role in Environment, *O. Dubovic*, Volume I, Oaxaca, México

2. Enforcement of Environmental Legislation Under Criminal Law by the Public Prosecutions Department in the Netherlands, *G. van Zeben*, Volume I, Oaxaca, México
3. The Evolution of Environmental Crimes Enforcement at the United States Environmental Protection Agency, *E. E. Devaney*, Volume I, Oaxaca, México
4. The Role of the Inspectorate for the Environment in Tracing Environmental Crime in the Netherlands, *D.J. Van Zeben, J. van der Plas*, Volume I, Oaxaca, México
5. Summary of Workshop: Criminal Enforcement Role in Environment, *Facilitator: G. van Zeben, Rapporteurs: A. DeLong, T. Shewmake*, Volume II, Oaxaca, México
6. U.S. Experience and Differences Between Civil and Criminal Investigations and Use of Central Elite Force to Supplement Local Inspectors, *C. Wils and D. Gipe*, Volume I, Budapest, Hungary
7. Choosing among Criminal, Civil, Judicial, and Administrative Enforcement Options, *D. van Zeben and M. Mulkey*, Volume I, Budapest, Hungary
8. The Environmental Prosecutor: The Experience of a "Central Command" Theory of Environmental Enforcement, *S. Madonna*, Volume I, Budapest, Hungary
9. The Application of Criminal Law Instrument in the Environmental Law Enforcement, *A. Hamzah and R. Surachman*, Volume I, Budapest, Hungary
10. Combatting Environmental Crime in an International Context, *Y. van der Meer*, Volume II, Budapest, Hungary
11. The Role of INTERPOL in Environmental Enforcement, *S. Klem*, Volume II, Budapest, Hungary
12. Criminal Enforcement of Environmental Legislation, *H. Fangman*, Volume I, Utrecht, The Netherlands
13. Criminal Prosecution in Environmental Matters—The State Perspective, *J. Lynch*, Volume II, Utrecht, The Netherlands

## CRIMINAL ENFORCEMENT ROLE IN ENVIRONMENT

Facilitators: Tom Bispham, J. van Doorn  
Rapporteurs: J. Gras, L. Sievers

### GOALS

The sessions addressed the following issues:

- Sanctions and other consequences available through criminal enforcement and how effective they are in achieving compliance.
- The proper role of criminal authorities and sanctions in environmental enforcement. What the relationship should be between criminal and civil enforcement and for what types of violations criminal enforcement (rather than civil enforcement) is particularly well suited.
- Government entities involved in making criminal enforcement successful: how these different groups can be encouraged to work together.
- Training required to support criminal enforcement and training materials available.
- How INTERPOL works. Cooperative efforts among countries to prevent, detect, and prosecute crimes. What works well and what does not work well. What improvements can be made.

### 1 INTRODUCTION

In two sessions, the second of which only consisted of three persons excluding the facilitators and rapporteurs, several of the indicated topics were addressed. There also were discussions about negotiation versus criminal action, political interest in the brown environment, and environmental cases versus other severe criminality.

### 2 PAPERS

Six papers were produced on this topic. From China Mr. S. Wang wrote an article about environmental criminal justice in China. Mr. T. Bispham wrote an article about Oregon developing and implementing a state environmental crime program to complement their existing civil enforcement program. Different authors from the Netherlands produced four articles. Two were written on the environmental task of the police. One concerned targeting and criminal enforcement and the other is a manual on investigations of complex environmental offices.

### 3 DISCUSSION SUMMARY

#### 3.1 How does a country establish laws enabling criminal sanctions?

This is very difficult in countries where the economy has a higher priority than the environment or there is a lack of public awareness about the adverse effects on health and the environment from serious violations. It was also very clear that social, economic, and political matters make the environmental problem a very complex one. It was believed that the first step is to educate the public about the negative impact serious violations can have on public health and natural resources. Then, public awareness and their demand for strict laws and regulations needs to become a driving force. Education also needs to be elevated to the police, NGOs, prosecutors, judges and politicians, and to develop these entities into driving forces. It was also agreed that it is important to publicize environmental scandals as a means of public education and to create a deterrent effect. Publicizing scandals may also result in greater political attention and support. It was a general view that environmental enforcement may take years to develop. It is a long process of training, coordinating efforts and knowledge, developing laws and regulations, setting up permit systems, etc. In countries that seem to be far ahead now, it took years to come to the point where they are now. And the problem of getting and keeping environmental cases high on the priority-list is world-wide: it always has to compete with murder, rape, drugs, etc.

#### 3.2 Training

It was evident that a number of countries are in need of good training programs for investigators and prosecutors, and for judges too. Various networks need to be established to provide this service. The U.S. Environmental Protection Agency and the U.S. regional enforcement project may be able to serve this need to some degree. There is also a very basic need for some countries to have information on what constitutes civil versus criminal crime. In some areas a checklist approach has been found valuable in assisting inspectors to identify an environmental crime. Because of other priorities such as murder and drugs it appears that countries need to develop resources for dedicated environmental prosecutors. This would also be beneficial because many times the crimes are so complex it takes a full-time prosecutor to learn and apply the laws.

It was also very apparent that the most effective and efficient approach to addressing environmental crimes is a cooperative coordinated approach between affected programs like the police, the environment agency, prosecutors, fire and hazardous materials teams, etc. Defining roles, responsibilities and assigning accountabilities are imperative. It was said that in countries where the police are not involved in environmental enforcement but should be, a basic expertise is needed.

#### 3.3 Sanctions

There is a great diversity between countries regarding the nature of the sanctions and the use of sanctions. The sanctions vary from fines to jail time. From China, Mr. S. Wang reported on the recovery of the costs of investigations, repairs or clean up, enforcement notices, preliminary measures (by the prosecutor), external audits and the recovery of profit. There is also a variety of authorities that can impose the sanctions. Especially the fact that civil/administrative sanctions can be imposed not only by a judge, but also by the environmental agency and the local or provincial authorities.

In a number of instances, a country's economics and culture will dictate whether they utilize negotiations or enforcement. It was suggested that one should not overlook the value of equity between sources as a driving force. That is, maintaining a level playing field between sources so that a polluter does not gain an economic advantage over a clean industry. In some instances countries may find support from industry for developing a criminal program if they believe it will promote equity. There was also discussion about the imposing of sanctions on individuals when the situation becomes a serious social problem. This was for instance the case in private owned land use. It was clear that severe sanctions have a preventive effect because of deterrence.

#### 3.4 Role of Interpol

The role of Interpol was explained and the way this network operates. There was much interest to try and coordinate more between the various countries. An additional paper will be produced in which the Interpol-function will be explained. The network covers some 157 countries. In the European region Interpol has a working group established for further concrete information exchange. Until now it was hard to get in contact within Eastern Europe in the Interpol working group, but now there will be extra efforts made to involve this region.

#### 3.5 Different issues discussed

The situation in Estonia recently changed under a new law, which indicates that the Department of Environmental Protection is responsible for the environmental enforcement both green and brown. This used to be a task for the police. The department has no investigatory knowledge so enforcement is a big problem.

In one rapidly industrializing country in Asia a participant observed that environmental enforcement doesn't have a high priority. Economic development comes first. Besides this, the police nor the public prosecutor have skills or knowledge to handle major environmental cases. Only small companies or individuals are prosecuted. Training but also restructuring of the system is needed. According to official reports, the environmental situation is improving, but there are doubts about the trustworthiness of these reports. Public awareness is growing very rapidly and the government is willing to take more action.

China has a criminal code and separate environmental legislation. Criminal prosecution is only possible on environmental laws if this law relates to the criminal code. There are a lot of offenses on which a judicial reaction should have followed, but because of the legal system it is very difficult to prosecute. Besides this, there is a very high priority on economic development. The public has the same view.

Jamaica has a problem with smuggling of endangered species, which are on the brink of extinction. They seek cooperation with the U.S. Customs and the Convention on International Trade in Endangered Species (CITES) organization to give an effective response to this threat.

A major problem in Malaysia is the dislodging of ships in the waters of Malaysia. There is action being taken but it could be more effective if there was information exchange about these kinds of criminal activities and the owners of the ships or the agents internationally.

#### **4 CONCLUSIONS**

The general remark was that environmental enforcement and criminality is a complex problem because it is highly related to the political, economic and social situation. In all countries it is hard to get and keep environmental issues high on the priority list.

The role of public awareness is vital to compliance and enforcement: The environment has to be a social issue and much more energy should be spent to educate and inform the public. This could provide a main driving force in all countries.

The effectiveness of sanctions should be seen in repairing of the damage or prevention of further damage. Equity is an important factor both in enforcement and in sanctions.

There was much support for international exchange of criminal information via the INTERPOL-network or otherwise. Information about cases in other countries may strengthen national cases and violators can more effectively be detected.

The conclusions of the third conference were supported: Civil and criminal sanctions can play an important role in environmental enforcement programs and send a strong deterrent message to industry and the public. Effectiveness in enforcement is best reached by cooperation between all agencies involved. Training remains essential to effective enforcement.

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## **THE ENVIRONMENTAL TASK OF THE POLICE: 1990-1994**

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### **SUMMARY**

During the years 1990-1994, intensifying the environmental task of police coincided with the reorganization of the police, which brought both advantages and disadvantages. As laid down in "Maintain or lose" (the 1991 policy plan on environmental tasks by the Chiefs of Police), the starting point was the integration of environmental tasks in police work as a whole. Seemingly a paradox, in the first phase of accomplishing the task both the Coordinating Police Council and the various forces opted for projects. This approach led to a satisfying number of good results in several fields, specifically internal organization and setting the criteria for law enforcement.

The police connected to environmental networks and made their position with regard to environmental law enforcement clear to the public and other authorities, which meant more attention to consultation and definition of tasks and responsibilities than concrete action. During this phase experience was gained with certain methods of thinking and working which very often appeared to be trend setting. The ultimate goal (integration of the environment in the total police task) has not yet been reached; the goals mentioned by the heads of the forces in their 1991 statement have been partly realized, but still require extra attention.

## **1 THE ENVIRONMENTAL TASK OF THE POLICE 1990-1994**

### **1.1 Introduction**

During the first three years in which the police received National Environmental Policy Plan funds, much has been achieved. Particular attention has been paid to conditions for efficient environmental law enforcement by the police. The next three years will in particular focus on the way the environmental task is performed. This chapter will discuss developments up to 1995.

The early 90s saw the publication of "Handhaven of verliezen" ("Maintain or Lose"), an environmental policy plan for the police, by the Coordinating Police Council. The plan presented vision for the way (form and contents) in which the police were to carry out their environmental task in relation to their other tasks, the authorities, and partners in environmental law enforcement. Toward the end of 1991, the joint heads of forces, united in the Coordinating Police Council, issued a statement containing a number of goals as regards the implementation of the environmental task of the police.

Starting in 1991, National Environmental Policy Plan funds were made available to the departments which were to play a role in this accomplishment. The police were promised and earmarked an amount of 73.5 million guilders (US\$ = .5878 guilders) in 1992 rising to U.S.\$ 60 million in 1994. After that the money was to be integrated in the total police budget. (In the course of 1994 the department decided to extend the period for earmarking funds to 1998, see chapter 2).

## 1.2 New phenomenon

Compared to more traditional police tasks, environmental tasks are relatively new. Implementation of these tasks were to take place in the same period of time that the police organization underwent a rigorous reorganization. This had both positive and negative effects, the positive being that here was a chance to integrate a well-determined task in the new organization, the negative effect that it appeared to be difficult to ask their attention for a relatively new phenomenon in a time when the police were occupied with many other important matters.

As indicated earlier, when the contents of the environmental tasks of the police were determined, particular attention was paid to the setting up of conditions and the creation of the right infrastructure. On December 3, 1991, following a conference on the environmental tasks of the police, the Coordinating Police Council came with a statement in which they asked the competent authorities to promote a certain number of goals:

- The budget: In view of the effects environmental legislation would later have on society, the level of effort should double by 1995; in money terms this would be 4% of the budget.
- Training: By 1996 all police officers involved in the environmental task must have attended a relevant training course, both as regards general and specific subjects.
- Internal environmental measures: In 1995 internal measures must have been established.
- Computerization: A rapid development of computerization and coordination with other parties involved in environmental law enforcement.
- External cooperation: Providing expertise to other parties more explicitly, and thus contributing to proper enforcement of laws and issuing of permits.

## 1.3 Advisory committee

The Coordinating Police Council created an Advisory Committee on the Environment, similar to advisory committees for other police tasks. As the environment was a novelty for the police, and there was a great need for exchange of information and experiences, the operational environmental discussion group, consisting of the heads of the regional bureau's, was started. A project organization, under the guidance of the (acting) portfolio holder, was asked to coordinate and stimulate the implementation of the environmental task.

## 1.4 Budget

Since 1991 the Ministry of the Interior and the Ministry of Justice have made funds available to the police under the National Environmental Policy Plan. For each regional force and the National Police Agency, this so-called National Environmental Policy Plan money amounted to 60 million guilders (US\$ = .5878 guilders) a year until 1994. One of the goals referred to earlier (at the end of 1991) mentioned 4% of the budgetary means in 1995 for environmental law enforcement. Questionnaires and inquiries have made clear that the forces indeed now spend some 4% of their budget on this particular task, especially when one looks at the amounts spent on training courses.

As mentioned above, the funds will remain earmarked until 1998. Up to 1994 the National Environmental Policy Plan money was made available on the basis of the project plans of the various regional forces.

### 1.5 Training courses

Another important feature of the infrastructure development was training. The National Centre for Police Training developed national training courses for the various target groups (basic police officers, management, criminal detectives, traffic police), which were financed with money made available specifically for this purpose between 1992 and 1994. The courses were partly given within the forces, and partly at the National Centre for Police Training. At the end of 1994 almost half of the number of police officers (8196) had received their compulsory training. The optional modules were not as popular as the compulsory ones at first, but this appeared to change in the middle of 1994.

### 1.6 Computerization

The proposed infrastructure also offered ample room for computerization. A national inquiry into the information available in the field of the environment led to a national environmental data list which can be used irrespective of the computer system used. Pilot schemes which are to lead to the implementation of this dictionary in the systems used by the various forces are currently being held in the Friesland and Groningen regions. The National Criminal Intelligence Division of the National Police Agency is currently involved in a pilot which is to lead to one national system for information exchange to which the regions can connect.

### 1.7 Internal environmental measures

As the police are to set an example, it is not just the external task that is important, but also internal environmental measures which need to be taken. During the environmental conference referred to above, the heads of the forces came up with a recommendation which is to lead to internal measures in 1995. "Care of environment starts at home" is especially true for the police; national seminars are held, and a video tape has been compiled. It is very often difficult to determine who is responsible for the necessary measures within an organization; first it was thought that this was the task of regional environmental bureaus, but later it was concluded that management all through the organization is responsible (supported by the logistics unit).

### 1.8 Participation in the law enforcement network

For the purpose of environmental law enforcement, a separate structure was created (by letter of Minister of Housing, Spatial Planning and the Environment dated October 11, 1990) which put the emphasis on the "Joint Regulations" level (i.e. agreements by a group of municipalities to work together in certain areas of their responsibilities). The police have had to obtain their proper place in this, and now cooperates with the Public Prosecution, municipalities, provinces, the Inspection for the Environment, the Ministry of Transport and Public Works, and designated enforcement agencies/officers. As often the police region borders do not coincide with those of "Joint Regulations" regions, the police frequently have to point out to their partners that the priorities cannot be determined in the police-"Joint Regulations" discussions, but these have to be set in the three-party discussions. Often the police were and are represented by the head or other representative of the regional environmental bureau. It is obvious that this task should be fulfilled better by a district manager.

### 1.9 Position in the organization

Regional environmental bureaus have been set up in all police regions. Policy plans in the field of the environment were made and coordination took place within the network and law enforcement structures. The starting point for all activities was the integration of the environmental task in the basic police function. In order for integration to be successful, specialist knowledge must be available as a supporting specialization, and not (or only very limited) as independent assistance. So, most regions have specialists available at district level (usually full-time coordinators) and basic unit level (usually part-time).

A great number of regions also made staff available within the serious crimes division for the fight against serious environmental crime. Up to now, the number of cases dealt with has remained limited; often one chose to cooperate with others in the form of projects. Only part of the officers occupied with the environmental task came from the organizations; support by management was often lacking.

### 1.10 Crime Investigation Service

As explained above, most police regions had chosen the support of specialists. Where Crime Investigation Service activities are concerned, however, the specialist knowledge is independent. In 1991 a pilot project was started in which four criminal investigation services and the National Criminal Intelligence Division participated. Their aim was to improve the way information, needed for the fight against environmental crime, was supplied. Later almost all regions joined the project.

From the final report it appears that large investments are needed in order to come to a proper information position. Existing techniques, used for the more traditional forms of crimes, are only partly suitable in view of the intertwinement with the so-called upperworld (authorities and businesses), and new methods and techniques must be developed. However, the investment needed (both with regard to time and capacity) does not have to be restricted to the fight against environmental crimes, but will also help the information gathering as regards other forms of organized crime which involve the upperworld.

### 1.11 Environmental map

When determining the form and nature of the environmental task of the police, the environmental map is a useful instrument. As it has several functions, the map might be of use for law enforcers working in the field, it can help policy makers when setting priorities, and it can be used when the Public Prosecution, the authorities, and the police together set their priorities. The majority of the forces have devised some form of environmental map.

### 1.12 New style police

In addition to the concrete and tangible results, the environmental task of the police also led to other, positive effects. Examples of these are:

When performing their environmental tasks, the police gain experience in working within complex networks.

The environmental tasks have caused the police to look differently at the fight against crime as the intertwinement of upperworld and underworld and the development of new working methods are subjects which specifically demand attention.

Environmental law enforcement has taught the police that targets can be reached in different ways. The application of relevant laws is only one instrument, and alternative means are being developed.

Through the role they play in environmental law enforcement, the police are expected to set an example.

## **2 THE ENVIRONMENTAL TASK OF THE POLICE 1995 - 1998**

The previous section gave an overview of the developments until 1995. This chapter deals with the visions, objectives, starting points, and goals which have been laid down in the note "The Environmental Task of the Police 1995-98 Achievement and Inspiration".

### **2.1 Summary**

The second period of implementing the environmental tasks of the police will be characterized by special attention to actual performance; the main aim is (and was) the integration of environmental tasks in the police task as a whole. The police will increasingly participate in environmental law enforcement in both the "green" and "grey" fields.

Professionalism and cooperation are key words, both with regard to operations and policies. Exchange of information, internal and external, at the local, regional, interregional, and national levels appear to be essential. Serious environmental crime is an important goal; the international and sophisticated nature of it demand a new approach. Providing specialist support will remain important to the quality of the environmental tasks of the police.

### **2.2 Continuation**

On 29 March 1995, the Joint Chiefs of Police decided to continue their efforts to implement the police's environmental tasks and to integrate the accompanying activities in general police work. The aforementioned note was agreed on unanimously. It mentions the objectives, starting points, and goals for the period from 1995 to 1998, and is based on the expected developments and trends in those years. The main aspects of the environmental tasks of the police and a concrete plan for the desired situation within the police organization are given, as well as the relation to external partners and the competent authorities. The note also gives a description of the role of the Council of Police Commissioners. This role is described below. The note also gives an account of internal and external developments in the past period of the National Environmental Policy Plan.

By determining the contents of the note "Achievement and Inspiration" the Chiefs of Police, united in the Council of Chiefs of Police, recognized that it is still too early to abandon the environment as a specific point of discussion and attention. Internal inventories and various reports, by several agencies and bureaus, such as WODC, AEF, and Klinkers, indicated that intensive implementation should be continued.

### **2.3 Implementation**

In the past period emphasis was mainly laid on infrastructure, organizations, structure and division of tasks and responsibilities, devising plans and projects; in the years 1995-1998 emphasis will have to be on actual implementation. Investments must lead to growing achievement

now that the reorganization of the police has almost been completed. From the 1994 figures provided by the Public Prosecution the change is already noticeable: the share of the police with regard to the number of official environmental reports increased by 20%.

In the years 1995-1998 this specific task of the police should also be integrated in the total police work, which means that after that, specific attention to the environment, just as in the case of traffic or cid work, is no longer needed.

At the national level efforts are also being continued. Here too, integration is the objective. The projects will come to an end, and the activities which are now the result of specific attention for the environment will then be part of the general portfolio of the Council. For instance, the follow-up to the Crime Investigation Service pilot will be the responsibility of the advisory committee on crime, and training courses will be supplied by the Advisory Committee on Personnel and Training. The Advisory Committee on the Environment will continue its activities for the time being, but gradually take the role of initiator and director of current and future developments.

#### 2.4 Developments and trends

Environmental awareness is increasing, especially since the measures taken by the authorities will become more and more important to the public. And the fact that the authorities aim to withdraw and leave more to the "market" or businesses means that the nature of law enforcement, and so the working methods of the police is changing.

International developments will have their influence on the police as well. The relation between East and West (serious environmental problems in the former Eastern Bloc countries), and the relation North-South (protection of species threatened with extinction, the dumping of waste in Third World countries) will play a bigger role in the future.

The environment will be part of the integral safety policy, and so the integral approach will become more important. Three-party discussions will be held at all levels. All the while the reorganizations within the Public Prosecution Service and other authorities will demand attention. The need for cooperation and harmonization of activities will increase, both among and within the relevant agencies. Chain approaches will be used more often so as to gear policy and operational activities.

Environmental crimes are expected to increase in size and number. The organizations behind these crimes will be run more efficiently and more intellectually, and more often there will appear to be ties with other forms of crime.

This vision with regard to future developments, together with the current state of the environmental task of the police, leads to the following main lines for the coming three years.

#### 2.5 Main lines of the environmental task of the police

The police will have to make an extra effort in this field to ensure that at all levels within the organizations there is support and expertise. The priorities set in police, activity, and workplans will have to be followed by adaptations of the budget and number of staff. The environment is to become one of the many areas of attention for the police. Involvement, setting an example, and steering by management are essential to this.

Dealing with the so-called "free-field" crimes by the basic police officer/unit is particularly important, both with regard to the green and the grey environment. Knowledge about legislation and green networks will have to be increased. Cooperation with the authorities will have to lead to the most effective approach as regards the free field tasks.

The fact that environmental crime is on the increase necessitates extra stimulation for the building-up of know-how needed for the fight against this form of crime. This applies to both the information position (Crime Investigation Service) and the right number of expert staff needed.

The fight against environmental crime also calls for the development, in cooperation with the Public Prosecution, of new methods and techniques, such as phenomena approach and risk analysis. The dumping of waste should be a particular field of attention, both national and international. The police will have to invest in cross-border cooperation. The exchange of information will have to be intensified, and actual cooperation will have to be extended further.

The cooperation with the other partners involved in environmental law enforcement will have to be deepened and elaborated. From the description of responsibilities it will be clear which agency is to be approached first, and all those involved will have to be prepared to consult one another with regard to their activities. The quality of law enforcement will increase through the integral approach.

The exchange of information with the authorities and special investigation services will have to be extended, and the police will actively support the creation of law enforcement team at municipal level. In the three-party discussions, the police will have to prove that they are a stable, reliable and knowledgeable partner. Obviously, the submission to the competent authorities will remain a given fact.

In the coming period emphasis will be placed on the actual performance of the environmental task. Priorities must lie with both the grey and the green environment. At the basic unit, district, and regional levels, the proper expertise will have to be available. This obviously calls for professionalism. The inter-regional task will have to be extended as well. The right capacity must be made available in order to be able to deal with matters which are of super-regional or national importance. Current information projects must be continued in order to ensure an efficient exchange of information.

## 2.6 Objectives and starting points

The main objective is the total integration of the environmental task in the total police work in 1998. However simple this may look, quite a lot of work is required in order to achieve this objective. The formal integration may have taken place (mainly with ordinary units, but also with some specialized environmental bureaus), but the actual integration will have to be as described below.

The starting points are, as far as the underlying intention is concerned, comparable to those laid down in "Maintain or Lose". The 1995-1998 note takes up current issues and puts emphasis on implementation and the concrete measures needed, whereas the 1990 note places the main emphasis on the formal integration, structures, conditions, and position in relation to external partners. The points of departure are based on what should be. Where this has not been realized, the spearheads are meant to serve as guidelines.

The first starting point refers to the police tasks with regard to environmental law enforcement. These are:

- Eye, nose, and ear function, detection and handling of simple crimes.
- Provide support to the authorities, exchange of information with law enforcers, strong arm, preventive role, in particular with regard to checks at businesses.
- Detection, in particular of serious environmental crimes.

The second starting point emphasizes the importance of cooperation and gives examples of how this cooperation can be realized with regard to the new regulations on designated investigators/designated investigation services. Other law enforcers are to be cooperated with regard to all tasks; the integral approach is to be strived after:

- In the cooperation with designated investigation services/designated investigators the police are “primus inter pares”, and have an obvious coordinating role because of the general competence with regards to criminal investigation.
- Activities are directed by the competent authorities, who are responsible for the integral security policies.

The third starting point deals with the quality and professionalism of the police's environmental task. All levels within the organizations are confronted with certain requirements; they concern both general police work and the specialized tasks:

- The police have specific knowledge at the basic level: basic police officer/basic police unit, both as regards the green and the grey environmental task.
- Support in the form of specialized knowledge is available within the own organizations.
- Both for crime investigation and forensic investigation, expertise in the field of criminal investigation is available.
- The management is involved.
- The environment is integrated in the police task as a whole.

## 2.7 Goals

The questions asked and answered on the basis of the goals chosen are the following:

- How will the police function (in three years time) when the environmental task has found its proper place among the other police tasks?
- How will the partners/authorities function when the police have given the environmental task its proper place among the other tasks?

### 2.7.1 Integration

Integration of environmental law enforcement in the police task and organizations as a whole means that environmental issues are recognized and acknowledged. The environment is seen as a part of general issues on quality of life, security, and integrity. All levels of the organizations have adequate knowledge regarding the environment to perform their tasks properly; the management is environmentally aware, has a proper basic know-how, and knows the broad outline of the “environmental map” of his or her area. The manager participates in the discussions which are held with the authorities and the Public Prosecution, supported by specialists where needed. The manager will set the example within the force and supports other officers to reach the goals. Specialist support is available within the organizations.

Where matters of the environment are concerned, the manager serves as the contact for external partners and as support for the force. Gathering and exchanging operational and management environmental information is organized. The environmental task is included in the usual cycle (planning-budget-accounting). On the basis of agreements, the police can refer to their partners and competent authorities. The environment is discussed in the three-party discussions, and is part of the discussion on integral security, quality of life and integrity.

The information on the basis of which priorities are set is provided collectively. For the police the municipality is the first level of discussion; clarity as regards competence and authorities is a precondition for adequate law enforcement.

#### 2.7.2 Basic police function

The goal which refers to a strengthening of the basic police function/unit deals with the self-evidence with which environmental issues are encountered. This is as self-evident as giving a ticket for driving through a red light or drawing up an official report on a theft. The basic police officer knows what to look for, and has "green antennae". Goal-directed and planned activities take place. Cases which are based on efficient planning and information get a follow-up. The basic unit has the know-how to cope with semi-serious environmental crime. The basic unit has a clearly marked "letter-box" for externals and a specialized "think tank" for colleagues. The local competent authorities direct their questions in principle to the basic unit first for matters of a semi-serious nature; arrangements have been made at this level with regard to the division of tasks, work, and responsibilities. As regards criminal proceedings, agreement has been reached with the Public Prosecution.

#### 2.7.3 Enforcement of "green" laws

The third goal deals with the improvement of the approach to law enforcement which is directed to conservation of the environment (enforcement of "green" laws). The police know of the green network within their region, and are the director of coordinated and coherent law enforcement. The importance of green enforcement is recognized and the basic unit has adequate knowledge in the field; here too, the basic police officer has green antennae. In the policies the enforcement of green laws plays a role similar to the enforcement of other environmental laws.

The partners know where to find the police and are aware of the added value of cooperation. These agencies gear their activities and projects with the local police. On this subject too, agreement on criminal proceedings has been reached with the Public Prosecution.

#### 2.7.4 Serious environmental crime

The goal regarding this subject leads to an insight into the nature and extent of this form of environmental crime. This can be achieved on the basis of risk analysis and phenomenon directed efforts. Each force has the right capacity and know-how to fight regional serious crime. The forces have agreed to provide each other with capacity and know-how in cross-border cases. The project team on serious environmental crimes supports other forces in the creation of know-how and information gathering. The criminal intelligence project continues in the sense that the recommendations will be followed. The National Criminal Intelligence Division of the National Police Agency plays a supportive role in this.

The competent authorities will set priorities for the fight against serious environmental crime on the basis of, i.e., the outcome of risk and phenomenon analyses. The damage to the environment is weighed against the catching of the perpetrators.

#### 2.7.5 Cooperation

This goal refers to the cooperation among the various forces, authorities, and partners at all levels. An important aspect of the external cooperation is the way the exchange of information is structured. As the environmental task of the police is to fit in the regional enforcement chain, it is also of importance to define the methods which are used. The police do not have to be omnipresent; what is essential is that the information needed is exchanged effectively and efficiently. The police are also to give signals to the authorities and provide the latter with support.

The police can also give names of bureaus and institutions where information on external judicial and hygienic knowledge is available. The forces and the National Environmental Crime Investigation team will also gear their activities related to the fight against international environmental crime. They make expert knowledge available to one another and promote concrete international projects, for example with regard to flows of waste and CITES (directed against the illegal international trafficking of protected species). The authorities are responsible for enforcement; the police are informed on the state of affairs, and participates in discussions. The authorities are to safeguard an efficient gathering and exchanging of information at the regional level. Both with regard to operations and policies, discussions are held at local (basic unit/municipality), regional, and national (Public Prosecution, Chiefs of Police, Council of Police Supervisors) levels in an early stage.

#### 2.7.6 Exchange of information

Still another goal for the police is the creation of an inter-regional and national exchange of data regarding the environment. In order to facilitate this, information is stored in computer systems (like GUM - Gegevens-Uitwisseling-Systeem Milieu - Environmental Data Exchange System). Managers can use this information to set the necessary guidelines. The milieu-expertise-centrum project enables the various forces to exchange information on innovative and relevant operational developments.

#### 2.8 Tasks for the Council of Chief Commissioners

From the above it will be clear that the forces will have to make the most substantial contribution in order to realize this goal. The Council will be in a position to give the necessary support, and commit themselves to this in their note.

Training will be provided with regard to the strengthening of the basic police function/unit and the management. The efforts of the "desk for information and expertise on the environment" must be maximized, and models for covenants will be drawn up at national level.

In order to implement the approach with regard to legislation in the field of protection of the environment, an inventory will be made of the "green network". What has happened since the field police ceased to exist, and what work has not been done? The expectations one has of the police with regard to green enforcement are currently being investigated, and the CITES project will be continued.

In the fight against serious environmental crime, the Council will prepare and promote the use of the "project team on serious environmental crime". Regions will make arrangements for the fight at the super-regional level. The Council will also play a role in the continuation of the Regional Crime Investigation Service pilot. The outcome of (WODC) investigations, risk and phenomenon analyses, both internal and external, will be made known in order to facilitate policy making. As regards cooperation, the Council will provide information and mediate, at the national level, between the Council of Supervisors of Regional Police Forces, the Public Prosecution, Council, representatives of special investigation services, and authorities involved in law enforcement.

In cooperation with the relevant regions, the Council will complete computerization pilots and the desk for information and expertise on the environment project; the Council will also promote the implementation of environmental modules which become available and the connection to the national environmental data system (GUM).

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### 3 FINALIZATION

On 12 April 1995 the second conference for environmental law enforcers "Werk in Uitvoering" ("Men at work") was held at the RAI centre in Amsterdam. The theme of the conference was "Work in progress, up to here, and further on". Besides approximately 900 environmental law enforcers from provinces, municipalities, the Ministry of Public Works, district water boards, etc., there were more than a hundred police officers involved in environmental law enforcement.

Towards the end of the day, the representatives could vote on a number of propositions. In 1993 many saw no major role for the police; in 1995 this role was self evident, but now 75% of those present appeared to have no major confidence in the way the police perform their task. A mere 25% agreed to: "the police have substantially invested in the past few years; the next few years will be characterized by results". So, the portfolio holder for environmental issues of the Council of Chiefs of Police, R.H. Hessing, ended his presentation with the wish that the outcome would execute the environmental task, both within the police organization and where the cooperation with others is concerned. For the police too, the slogan still is: Up to here, and further on!



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## THE ENVIRONMENTAL TASK OF THE POLICE: 1995-1998

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### SUMMARY

The Dutch Environmental Policy Plan has earmarked funds for three years (1991-1994) to support environmental tasks of police. The police still have quite a bit of work to do in the years 1995-1998 to perform their environmental task at the right level. The infrastructure has been created, but now the time has come to intensify the efforts. After having anticipated trends and expected developments, plans have to be implemented. This means also gearing the efforts with those of the partners and authorities in the field of environmental law enforcement. Secondly, the function of the basic police officer/unit must be strengthened through professionalism, through expertise, and management support by the. Thirdly, serious crime must be paid particular attention to; central in this are the creation of know-how and expertise, the development of new instruments, and making capacity and know-how available to address environmental crimes at regional and supra-regional levels.

### 1 INTRODUCTION

The last years, particular attention has been paid to environmental law enforcement. The National Environmental Policy Plan provided various authorities with the financial means to perform their specific tasks in the field. The police too have made an extra effort with regard to environmental law enforcement. Environmental law enforcement appeared to be trend-setting: a New Style of Police seemed to develop.

The earmarking period for which the funds were provided under the National Environmental Policy Plan has been extended by another three years until 1998. Despite some concrete results, there is still a lot to be done.

This note, "Environmental task of the Police 1995-1998: Achievement and Inspiration" is meant to provide support for the extension of the environmental task within the police force. In order to achieve this, the contents of "Maintain or Lose", the environmental task of the police, written in 1990, will be highlighted and concrete suggestions will be given.

The note is also meant to provide starting points for consultations and covenants with the authorities in the various police regions.

The Coordinating Police Council report "Maintain or Lose", which appeared in 1990 was an environmental policy plan for the nineties by the Dutch police. Just before this report, the National Environmental Policy Plan was published. On the basis of this National Environmental Policy Plan, the government decided that the police were to play an important task in environmental law enforcement.

This first environmental policy plan by the police largely contributed to the development of the environmental task of the various police forces. It made clear how the police task as regards this subject related to other enforcement agencies and how the task should be fulfilled.

The developments both outside and within the police have made it necessary to bring parts of the 1990 policy plan up-to-date now that we are halfway through the nineties. The National Environmental Policy Plan 2 has appeared, the Protection of the Environment Act has come into force, and the police have gone through a far-reaching reorganization. However, the quality of the environment seems worse than ever before, and despite all efforts, it will be difficult to look to the year 2000 in a positive way.

This note is not just a more recent version of all of the details of the "Maintain or Lose" policy plan. As the situation is developing rapidly, and the details therefore become obsolete very easily, this note will only give a broad sketch.

The note starts with a vision regarding the developments and trends which are expected for the coming three to five years. This vision forms the basis for the starting points, the objective and the key points for the environmental task of the police for 1995-1998/2000. The key points (i.e. the actions to be undertaken) will be elaborated in proposals which are as concrete as possible. This elaboration is accompanied by a presentation of the situation within the police and of the partners of the police when the environmental task is performed well. Expectations are explicitly made clear.

The above is followed by a general overview of a number of relevant developments, documents and sketches from the partners of the police and from within the police, as occurred between 1990 and 1994. The general tendency in this same period as regards the environmental law enforcement is also discussed.

Looking back serves two purposes. The first is to provide a picture of the developments that were relevant for the police and their partners as regards the environmental task, the second provides a basis for the policy in the coming period. Knowing the history will teach us to act better in the future.

The environmental task of the police in 1995-1998 offers a challenge for achievement and food for inspiration.

## **2 BROAD SKETCH OF DEVELOPMENTS AND TRENDS 1995-1998**

### **2.1 General introduction**

Before determining starting points, objectives, and key points, the vision regarding the developments which are important to the selection of these will be discussed. Both the ideas as regards the expectations for the future and what has been done in the past (chapter 7 and 8) will serve as grounds for the direction into which policies go.

### **2.2 Relevant developments in society**

Quite a few measures have been taken to tackle current environmental problems. These problems are expected to grow in size for the time being, perhaps not so much in the Netherlands and surrounding countries, but certainly in other parts of Europe (in particular former Eastern Bloc countries) and the world. Both the relation East-West and the relation North-South are of interest. Transport and dumping of waste in third world countries, deforestation of tropical rain forests, and the disappearance of biotopes are only a few of the issues which require to be dealt with at the international level.

There is no doubt that environmental awareness is increasing. The measures taken by the authorities are becoming stricter. However, increase of livestock and, consequently, the surplus of dung, and the increase of fuel prices, usually go hand in hand with seemingly paradoxical

measures such as leaving decisions to businesses and "the market" in the fields of waste disposal and environmental measures within factories (see also the OESO report on the environment and measures in the Netherlands).

In order to be able to adequately deal with the relation between the environment and the economy, the environment will gradually have to be taken into account in the discussion of issues of a more general nature. The integral approach, in which attention is paid to more than one aspect at the same time, will become more widely used and supposedly more successful. Regional and national "three-party discussions" <sup>1</sup> will become more important and greatly influence the discussions regarding general safeguarding. The restructuring of the National Public Prosecution Service and the reorganization of public authorities will have to be paid attention to in the various regional three-party discussions.

Among and within the relevant institutions, the will and the need for a better harmonization of the various law enforcement activities increases. Measures that are taken are increasingly linked to one another; this means that policies and operations will also be better linked.

The fact that environmental issues become more complex means that solutions are not easily available, and that, consequently, a lot of money can be made from this; this may be done legally, but the chances are that illegal practices will be resorted to more frequently. Environmental crimes are profitable, and this is why organized crime becomes more and more involved and related to "ordinary" crimes, such as fraud and drugs trafficking. Fortunately, research will increasingly reveal what goes on, and, where traditional tactics and techniques fail, an "intellectual" approach will appear effective.

### **3 GENERAL OUTLINE OF THE ENVIRONMENTAL TASK OF THE POLICE 1995-1998**

The police will make an extra effort to carry out their task with regard to the protection of the environment and make sure that there is support and expertise all through the organization. The priority given to this specific task necessitates adjustments in all policy plans, activities, and working methods, and, of course, the making available of funds and personnel. Integration is the keyword for the coming years. An essential role in this (showing involvement, setting the right example, relevant steering) is to be played by those at management level.

Police constables and units have an important role in combating "free-field" crimes, which are related to both the green and the grey environment. The knowledge regarding "green networks" is to increase, and cooperation with the various authorities is to lead to an effective carrying out of the "free-field" tasks.

The fact that environmental crime is on the increase necessitates an extra effort to build up expertise as regards the fight against it. This is true for both the creation of information positions (Criminal Investigation Service) and the making available of ample and adequate staff. The fight against environmental crime also calls for a close cooperation with the Public Prosecution as regards the development of new methods and techniques. Phenomenon approach and risk analysis will be part of this, especially with regard to the national and international illegal dumping of waste.

The need for international cooperation will increase. The police, including the National Crime Investigation Team, will have to invest in international cooperation. The exchange of information is to be intensified, and practical cooperation in specific cases will have to occur more often.

The cooperation with other partners who are also involved in environmental law enforcement should be extended as well. It is important that responsibilities are defined, and that the relevant agencies are willing to consult one another. This means that the police are to gain a better insight in the existing rules and regulations (the issue of permits, the performance of checks, the assistance with regard to surveillance), and that combating of serious crimes is no longer the exclusive prerogative of the police and the Public Prosecution (the measures taken by authorities can also be effective). Here too, the integral approach will lead to an increase in the quality of law enforcement.

The exchange of information through coordination and information desks and others will have to be increased. The police will undertake better action so as to come to the creation of law enforcement teams at local and regional levels.

The police will have to be a stable, reliable, and knowledgeable partner in the three-party discussions. The subordination to the authorities is and will remain a given fact. The coming years, emphasis will be on the performance of the various tasks. Priority must be given to both the grey and the green environment. The basic police units, districts, and regional forces will have to have the necessary expertise to perform their (future) tasks with regard to environmental law enforcement.

The police also have to extend their task on the inter-regional level. A solution is to be sought for cases of environmental crime which surpass the regional and national levels. In order to be able to exchange information regarding issues at the national level further computerization is necessary.

### 3.1 Summary

The second half of the nineties will show an increase of the various environmental issues, both in number and size; it will also be a time of extended cooperation, disappearance of dividing lines, and integral approach with regard to both policies and operations.

The police will contribute more to law enforcement both with regard to "grey" and "green". Serious crimes will be a spearhead. Internationalization and sophistication of environmental crime call for a new approach. This must lead to a professionalization at all levels of the organization as regards the environmental task.

## 4 OBJECTIVES AND KEY POINTS OF THE ENVIRONMENTAL TASK OF THE POLICE 1995-1998

4.1 The period 1995 - 1998 will be characterized by the following starting points:

### 4.1.1 The police have the following tasks as regards the enforcement of environmental laws:

- The so-called eye, nose and ear function; spotting and dealing with simple offences in the free field.
- Supporting the authorities; exchange of information with relevant authorities, preventive role in surveillance actions, in particular with regard to businesses.
- Detection, in particular of serious environmental crimes.

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4.1.2 Cooperation with other law enforcement agencies as regards the various tasks; integral approach is aimed at:

- Cooperation with designated investigation services/designated investigators the police are "primus inter pares", and have a coordinating role in view of their competence with regard to criminal investigation; the authorities have the final say and are responsible for the integral safety approach.

4.1.3 The quality of the environmental task of the police will be adequate: the police contribute to the environmental law enforcement through their professionalism:

- They have specific know-how at the basis, basic police officer/basic police unit, both with regard to green and grey.
- Criminal intelligence experts at Criminal Investigation Service and research levels.
- Management is involved.
- Integration of the environment in other police tasks.

4.2 General objective

In 1998 the environmental task of the police will be integrated in the general police work.

Intensifying attention for the following spearheads will lead to the situation described below (chapter 5).

4.3 Goals:

- Realization of the integration of the environmental task in the general police tasks and the organization as such.
- Strengthening the basic police function/basic police units.
- Improving the approach as regards violation of measures directed at the protection of the environment (green legislation).
- Improving the approach as regards the fight against serious crime.
- Extending the cooperation among police forces and with other partners at regional, inter-regional, national, and international levels.
- Realizing regional, inter-regional, and national exchange of information on the environment.

The aforementioned spearheads will serve as the basis for a description of the functioning of the police (chapter 5), of their partners and the authorities (chapter 6), and the initiating and stimulating task of the Council of Chief Commissioners (chapter 7).

## 5 HOW WILL THE POLICE FUNCTION (IN THREE YEARS' TIME) WHEN THE ENVIRONMENTAL TASK HAS BECOME AN INTEGRAL PART OF THE TOTAL POLICE WORK?

Goals in terms of a desired situation within the police organization

### 5.1 Promotion of integration of environment in police task and organization as a whole

- Supporting and involving management through training and other measures.
- Indicating priorities in policy and activity plans.
- Indicating priorities in budgets.
- Providing specialist support.

The organization will be aware of environmental issues; the environment will be seen as an integral part of quality of life, safety, and integrity.

Managers know what the environmental issue entails, have a certain basic know-how, and are aware of what the problems are in their area.

The manager participates in the discussions with the Public Prosecution and the authorities, supported by specialists where needed; within the force, the manager is to set an example, and supports and stimulates other officers to get the best results.

The environment is always on the agenda, and is a subject which is constantly under discussion.

The organization has specialists in the field of environmental issues; they can be relied on for consultation and are the contacts for external agencies.

Know-how regarding the environment is available at all levels within the organization.

The organization has a well-structured system of collecting and exchanging environmental information (both at operational and management levels).

The environment (including internal measures) will be discussed in the force's annual report.

### 5.2 Strengthening of the basic police function/unit:

- Gathering specialist knowledge.
- Elaborating the eye, nose, and ear function.

The basic police officer knows where to look and what to look for; he or she has green antennae.

Realizing that environmental laws have been violated and that an official report is to be drawn up should be as self-evident as giving a ticket for a simple traffic offence.

Activities specifically directed to environmental law enforcement are organized; the approach to similar cases should be similar as well, and these cases are prosecuted.

The basic police officer has the necessary know-how and acts professionally.

The basic police unit can be consulted and provides specialist support; both internal and external partners, as well as the public, know who to approach.

The activities of the basic police unit are primarily directed to the fight against ordinary, non-organized crimes; know-how and manpower are available.

### 5.3 Implementation of the approach regarding violation of environmental laws (green legislation):

- Training courses include green module.
- Priority in policy and activity plans.

The police have an understanding of the green network and have a leading role in this network.

The basic police officer's knowledge of green legislation is such that spotting violations and drawing up official reports become self-evident.

The management is aware of the issues and discusses these when designing policies. (For further points, see remarks under 1).

### 5.4 Supporting the fight against serious crimes

- Strengthening the Regional Criminal Service/information position.
- Creating expert know-how (through criminal intelligence) and making this available.
- Using a project team in the fight against serious environmental crime.

There is an insight as regards the nature and extent of serious environmental crime; the phenomenon approach (for specific cases) and risk analyses are part of the pro-active method.

Every force has sufficient capacity and know-how to fight these kinds of crimes within their region.

The various forces will make capacity and know-how available for the fight against inter-regional environmental crime; the structure chosen fits in with already existing structures.

The experience gained in dealing with important cases and phenomenon analyses will be offered to the various forces through a "project team environmental crime".

The forces will implement the suggestions and recommendations in the Regional Criminal Service report.

The National Criminal Intelligence Division will make know-how, expertise, and information available and thus support the fight against serious environmental crime.

### 5.5 Extending the regional, inter-regional, national, and international cooperation within the police and with other partners

- Promoting the creation of law enforcement teams and coordination and information desks.
- Promoting concrete projects, such as those regarding dumping of waste and CITES projects.

The exchange of information between the police and their partners takes place in a structured way.

Agreements are made as regards the way cases are dealt with; matters initiated by the police will have a follow-up; the way the police deal with environmental law enforcement fits in with the regional approach.

When setting priorities, the importance of "catching the crooks" will be set against the damage that may be caused to the environment.

With regard to permits or the quality of internal environmental measures reports of certain enterprises, the exchange of information will be adequate.

The police do not have to be involved in all matters; quality of law enforcement lies in effective and efficient exchange of information.

To the authorities, the police have a signalling role in addition to their general supporting task (strong arm of the law) and assisting when checks are performed.

Police specialists know where extra know-how is obtainable and do not hesitate to ask for it.

The forces cooperate in the creation of law enforcement teams and coordination and information desks; the authorities bear responsibility for these.

The forces and the National Crime Investigation Team gear the activities regarding the fight against international and national environmental crimes, both with regard to exchange of information, willingness to cooperate, and making expert knowledge available.

#### 5.6 Realization of inter-regional and national exchange of information regarding the environment within the police

- Completion of computerization project national data exchange regarding the environment and pilot projects environmental modules Environment Management System and others.
- Stimulation of project Desk for environmental information and expertise.

The police have included the environmental modules in the various registration systems; connection with the national data exchange regarding the environment system makes exchange of information at a national level possible.

The management makes decisions also on the basis of environmental management information.

Innovative and relevant operational developments within the various forces are disseminated through a "system" to other regions which are involved in similar cases; the Desk for environmental information and expertise is created and implemented, first for environmental cases, later for general police work.

## 6 HOW WILL THE PARTNERS AND AUTHORITIES FUNCTION WHEN THE POLICE HAVE INTEGRATED THE ENVIRONMENTAL TASK IN THE TOTAL POLICE WORK?

Goals in terms of desired situation in relation to external partners and authorities

### 6.1 Promotion of integration of environment in police task and organization as a whole:

- The police can refer to external agencies who will react adequately.
- The environment has a fixed place on the agenda of the three-party discussions and is part of the discussions on integral safety, quality of life, and integrity.
- Priorities are set in relation to the total integral safety policy; the authorities make choices on the basis of information supplied by the sources together.

- The administrative structures are clearly defined; where structures are unclear, the municipal authorities will have the final say, and upgrading to the regional level will take place from that point.

6.2 Strengthening of the basic police function/unit:

- The local competent authorities consult the basic unit as regards ordinary and semi-serious environmental crimes.
- Local agreements are made as regards concrete tasks, the division of these, and responsibilities.
- Agreements have been made as regards prosecution; the Public Prosecution will start proceedings in cases put forward by the police.

6.3 Amelioration of the approach regarding violation of environmental laws (green legislation):

- Green law enforcement agencies ask the police for assistance and experience the added value of the cooperation.
- Organizations involved in "green law enforcement" gear activities and projects to activities of the local police force.
- The Public Prosecution has set guidelines for proceedings.

6.4 Supporting the fight against serious crime:

- Limiting the damage done to the environment is set against the advantage of catching the perpetrators.
- The competent authorities will give priority to serious (organized) crime.
- The competent authorities will take into account the results of risk analyses and phenomenon investigations when drawing up and implementing policies.

6.5 Extending the regional, inter-regional, national, and international cooperation within the police and with other partners:

- The authorities will realize the creation of coordination and information desks and law enforcement teams.
- The exchange of information at regional level (Joint Regulations Act and/or police region) is organized efficiently and effectively; the police will be provided with information needed to carry out their task of signalling and coordinating detection activities.
- The designated investigation services/designated investigators are in principle responsible for law enforcement in businesses/factories/premises; the police are kept informed on developments and provide assistance when this is requested.

- Agreement as regards the course and priorities of the environmental policy is to be reached in an early stage, both at national (Council of Chief Public Prosecutors, Council of Supervisors of Regional Police Forces, Council of Chiefs of Police), regional (regional college), and local (basic unit/municipal) levels, and within the law enforcement structures.

## **7 WHAT IS TO BE DONE BY THE COUNCIL OF POLICE COMMISSIONERS?**

### **7.1 Promotion of integration of environment in police task and organization as a whole:**

Test training courses for management on concreteness, region directed approach, stimulation as regards participation, try-outs.

Policy and activity plans: devising a draft covenant based on criteria set for the desired situation.

Budget priorities; preparation in discussions at national level (Council of Chief Public Prosecutors, Council of Supervisors of Regional Police Forces, Council of Chiefs of Police) as regards possibilities and contents of covenants.

### **7.2 Strengthening of the basic police function/unit:**

Developing the Desk for environmental information and expertise; exhausting the possibilities it offers to stimulate environmental awareness.

Continuing and if necessary adapt the programme of environmental training courses.

### **7.3 Amelioration of the approach regarding violation of environmental laws (green legislation);**

Making an inventory of all agencies dealing with green legislation.

"Examining" the regions in which the field police were active; what do the green law enforcers miss now that the field police are no longer there?; use the results of the examination to come to an advice for the regional forces;

Test the green environmental module on the basis of the results of the investigation into the expectations as regards the police.

The CITES project, in which the police, the Public Prosecution, the General Inspection Service of the Ministry of Agriculture, and the Customs cooperate, will be continued.

### **7.4 Supporting the fight against serious environmental crimes:**

Preparing and stimulating the efforts of the "project team environmental crime" when creating and extending the interregional knowledge as regards the fight against serious (organized) crime, by making use of the experience gained in large-scale investigations and phenomenon analyses.

Support the making of agreements with regard to the fight against supra-regional environmental crimes, all with respect for existing structures.

Making a follow-up to the Regional Criminal Service pilot; Together with the parties involved, test the criminal intelligence module with current developments in mind;

Stimulating phenomenon directed investigations and risk analyses in the field of serious environmental crime, and make the existence of these known to those services and agencies responsible for relevant policies.

Taking care of dissemination of the results of the Center for Scientific Research and Documentation examinations, including the results of the evaluation models.

- 7.5 Extending regional, interregional, national, and international cooperation within the police and with other partners:

Preparing and discussing the contents of national course and spearheads with Council of Supervisors of Regional Police Forces and Council of Chief Public Prosecutors.

Discussing gearing of activities and relationship with national representatives of designated investigators/designated investigation services.

Stimulating the fight against international environmental crime; paying attention to phenomena and trends in crime;

Informing the national partners on course and developments within the police; contributing to the knowledge regarding the police and their tasks.

- 7.6 Realization of interregional and national exchange of information regarding the environment within the police:

Completion of project national data exchange regarding the environment and pilot projects environmental modules Environment Management System and others.

Stimulation of implementation of environmental modules in all regional forces.

Completion of project Desk for environmental information and expertise.

Stimulation of acquisition and use of the Desk for environmental information and expertise and providing the public relations.

#### ENDNOTE

1. The authorities involved, namely the burgomaster, the head of public prosecution, and the chief of police.



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## ENVIRONMENTAL DUTIES OF THE POLICE IN THE NETHERLANDS

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### SUMMARY

Since 1992 over a third of all police-officers, i.e. basis-policeofficers, specialists and managers, have followed one of the specially designed environmental courses. An information module on environmental police-information was designed, to make communication possible on interregional and national level. The module is based on a handbook on the environmental task. All the necessary arrangements and studies have been carried out to establish an environmental information and expertise centre for the police.

The number of official reports and facts found on environmental matters have increased drastically over the last years. The police have in 1994 reported 8924 facts and in 1995 11385. The year 1996 seems to show a stabilisation. On serious environmental crime 56 cases were started 1995. Over 30 of those are still in process. The CITES-project (Convention on Illegal Trade in Endangered Species) has directly contributed to the start of 7 specific investigations. Much effort has also been put into designing-training modules, providing information and education on CITES and operating a help desk.

### 1 ORGANIZATION, AUTHORITY AND MANAGEMENT

The police force of the Netherlands is comprised of 25 independent regional police forces, which vary in size from 400 to 5000 officers, and a National Police Force of about 3000 officers. The regional forces are subdivided into districts and operating units. The total police force numbers about 40,000 officers on a population of 15 million.

The authority and management of the police are organized on a regional basis: this rests with the Chief Public Prosecutor, and the regional head of the police force who is the mayor of the largest city in the region. A board of all mayors in the region has an important voice in management questions. The local authority on matters of public order is the mayor of the municipality concerned. Criminal enforcement is conducted under the authority of the Public Prosecutor.

The enforcement of environmental legislation is based on the regions as defined in connection with the 'Joint Regulations Act'. This is a level of collaboration in which a number of (mostly smaller) municipalities synchronize their efforts. On occasion they also make agreements with other enforcement authorities active in this area. The synchronization activities concern the setting of priorities, and the approach to the enforcement of the environmental legislation.

The police play a part in this consultation and synchronization process. An environmental coordinator (a staff officer or an officer involved with policy-making) often participates in these consultations. The line management is also becoming involved to an increasing extent. Local consultations are also often held within each municipality, in which the police also participate. Enforcement activities are also synchronized in provincial environmental consultations.

The police have also been entrusted with the enforcement of environmental legislation by the Minister of Housing, Spatial Planning and the Environment. In the first instance the attention of the police was focused on participation in the above-mentioned enforcement organization. This participation has now been realized throughout the Netherlands.

## **2 SUPPORT, TRAINING, AND INFORMATION SYSTEMS**

### **2.1 Training**

Since 1992 much energy has been devoted to environmental training courses. About one third of all police officers have now taken one of the specially-designed courses; most have taken the general basic courses for enforcement of environmental legislation (see table). Fewer officers have taken the specialized courses, although the situation did improve in 1994. The course in environmental investigation and the course on the environment and traffic are examples of courses with increased attendance. The number of police in management positions who have taken an environmental course has also slowly increased since 1994. The course designed to be given jointly to the entire management of one district has proved particularly popular.

Newly developed courses include a course dealing with the enforcement of nature conservation legislation, and a course on the taking of samples by police officers. The first indications are that both courses are generating sufficient interest.

The number of police officers who have taken a course varies considerably across the regions. In some regions all junior police officers have taken a course, while in other regions many have yet to do so (see table 1).

### **2.2 Information systems**

Work has been carried out on an information system since 1992. This began with the compilation of a concise handbook on the environment. The handbook is now finished, and is being continually revised to keep pace with the continual developments in environmental matters. Pilot studies were made in two regions in which an environmental module was added to the basic police task processes system. These studies are now complete, and the modules are now ready for use. Messages are now being prepared to allow for the exchange of interregional and national environmental information. It is expected that trials can be run in the course of 1996.

### **2.3 Environmental Information and Expertise Centre**

In 1995 a survey was made of the needs and requirements of the regional police forces. It transpired that many regions considered a central Environmental Information and Expertise Centre to be of great importance. Each regional force would supply information about new situations, ideas, and developments in their region. This information would be made available to the other regional forces, where the centre would be responsible for the organized exchange of the information. The next step would be to provide expertise and advice to those requesting assistance. A strategic policy plan to establish such a centre is now complete. It is expected that the actual exchange of information via the Environmental Information and Expertise Centre can begin in the latter part of 1996, once the necessary finances have been made available.

(See also report on the Environmental Information and Expertise Centre in the exhibition)

Table 1. Participation in courses  
Summary of environmental examinations held in compulsory and optional modules

number of candidates											
modules											
YEAR	BEL	CEL	TEL	AEW	ANA	ARA	AWA	AAG	AEI	EEP	TOTAL
1992	283	133	313	0	0	0	0	0	0	0	729
1993	1268	246	1905	0	34	11	55	33	47	92	3691
1994	1016	411	2621	172	0	58	25	103	88	42	4536
1995	531	150	2830	121	61	63	51	92	59	63	4021
1996											
1997											
1998											
1999											
2000											
TOTAL	3098	940	7669	293	95	132	131	228	194	197	12997

- BEL Basic course on the enforcement of environmental legislation  
 CEL Compulsory section of advanced course on the enforcement of environmental legislation  
 TEL Combination of basic course and compulsory section of advanced course on the enforcement of environmental legislation  
 AEW Advanced course on the environment and waste  
 ANA Advanced course on the environment and nature areas  
 ARA Advanced course on the environment and residential areas  
 AWA Advanced course on the environment and water  
 AAG Advanced course on the environment and agriculture  
 AEI Advanced course on the environment and industry  
 EEP Environmental enforcement expert

### **3 OPERATIONAL DUTIES: THE NUMBER OF OFFICIAL REPORTS, SERIOUS ENVIRONMENTAL CRIME, WASTE STREAMS, #CITES**

#### **3.1 Number of official reports**

The police are making increasing efforts in the area of the enforcement of environmental legislation. These efforts cannot be measured solely by the number of official reports that have been made, although this does give a good indication. There has been a clear increase in the number of official reports from 1994 onwards. It can also be seen that there is a reasonable range in the kinds of official reports made.

Summary of the official reports made by the police in 1994 and 1995:

- 1994 - 8.924 facts
- 1995 - 11.385 facts

The Dutch national police corps is not included in these figures. The figures of the first half of 1996 show a stabilisation of the number of official reports. The exact number is close to the number of the first half of 1995. The figures shown give no information about the character/size of the reports made or the type of facts involved. This information was not yet available for me.

#### **3.2 (Serious) environmental crime**

Dealing with serious environmental crime is a matter which is receiving increasing attention from many authorities, including the regional police forces. Problems are often encountered with the manpower available, and the knowledge which is required. These are two of the reasons for the formation of the 'core' environmental team. The team formed to investigate the notorious TCR/TCA case in the Netherlands was not disbanded, but remained in existence in order to help the regional forces build up the knowledge they need. The TCR case yielded an amount of information which would have been sufficient to start seven cases immediately.

The acquisition of the required knowledge and the necessary manpower within the regional forces is now in progress. The forces are gradually developing their potential to be able to deal with increasingly larger cases. As such cases often need more resources than can be supplied by one police force, agreements are often used to enable a number of regions to collaborate on the case. Information from the Criminal Information Department of the National Police Force indicates that the police dealt with the following numbers of cases in 1994. The number of cases started in 1995 is 56. Over 30 cases are still in process. There have also been about 10 pre-investigations that were closed as such; the information was not enough to start a case.

If the share of the investigative authorities and the total of the environmental cases under the Economic Offences Act are examined then it can be seen that the share of the regional police forces is by far the largest. The share of the regional police forces increased from 56% in 1992 to 62% in 1994.

The share of official reports from the General Inspectorate decreased during this same period from 23% (1725 reports) in 1992, to 16% (1456 reports) in 1994. The reason for this decrease was the improved compliance with the Determination of Year-End Form Regulations.

**Table 2. Share of cases (%) between the various investigative authorities in the period 1990 to 1994 inclusive (\*)**

Authority, share in percentages	1990 (n=4500)	1991 (n=2974)	1992 (n=7030)	1993 (n=6861)	1994 (n=8852)
General Inspectorate	27	28	23	24	16
Regional Police Forces	49	47	56	56	62
Port authorities	11	12	6	5	2
Health Protection Inspectorate	3	5	6	5	3
Provinces / municipalities	2	0	2	3	3
Purification boards and water control boards	1	3	4	3	3
Others(**)	6	3	3	2	9
Total	100	100	100	100	100

(\*) The figures for 1990 cover all 19 Public Prosecutor's Offices, but not all cases. The figures for 1991 cover all cases for 7 Public Prosecutor's Offices. The figures for the other years cover all cases of all Public Prosecutor's Offices.

(\*\*) Including the National Transport Inspectorate, Customs, the military constabulary, and the Inspectorate for the Environment.

n Total number

The figures also reflect a decrease in the number of official reports made by the port authorities, in particular the Municipal Port Management of Rotterdam, on the grounds of the Pollution of Surface Waters Act. In 1992 387 official reports were made, which fell to 210 reports in 1994.

Another striking development is the increase in the share of 'others' in the number of official reports. This is caused by the increased enforcement of the Endangered Exotic Animal and Plant Species Act and the Import and Export (Endangered Exotic Animal and Plant Species) Decree by Customs.

### 3.3 Waste streams

During 1992 it became clear that extra efforts were needed to obtain an insight into waste, in particular waste streams, both within the country and transfrontier. This was the duty of the National Police Force, which is entrusted with the supervision of the through roads and waterways, the regional police forces, the National Transport Inspectorate, Customs, and the Inspectorate for the Environment. A joint project was initiated to train a large number of officers for the enforcement of the European Regulation on the supervision and control of shipments of waste.

The above-named authorities collaborated in several major waste inspections (the video in the exhibition shows an example). The police are also conducting an increasing number of independent smaller-scale inspections. The National Police Force is using inspection forms in order to obtain an indication of the movement of waste streams over the larger transportation routes. A comprehensive national project under the direction of the Ministry of Housing, Spatial Planning and the Environment together with initiatives by the National Police Force have the aim of giving a new impulse to the enforcement of the legislation on the transport of waste substances.

### 3.4 CITES

A national agreement has been signed between the police forces of Rotterdam/Rijnmond, the National Police Force/Criminal Information Department and the General Inspectorate of the Ministry of Agriculture, Nature Management and Fisheries. This purpose of this agreement is to stimulate the enforcement of the Endangered Exotic Animal Species Act and the CITES Decree. At the beginning of 1996 the agreement was prolonged for a further two years. A lot of patience is needed to get a clear picture of this area, and ensure that specific enforcement activities are taken.

The project has contributed towards the current situation in which 7 specific investigations are in progress. One case is already brought to court.

Apart from having contributed to judicial cases, the project has implemented a helpdesk on the CITES-subject. Another major activity has been the designing of education and training-programmes, especially for police-officers working in the general task as well as for those working in the criminal departments. Last but not least providing information and education on CITES has taken a lot of time and energy.

## **OREGON'S EXPERIENCE IN DEVELOPING AND IMPLEMENTING A STATE ENVIRONMENTAL CRIMES PROGRAM**

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### **SUMMARY**

For many years, Oregon's Department of Environmental Quality enforced Oregon's environmental laws solely through the civil process. By 1993, it became clear that the State needed authority to allow criminal prosecution of the most-egregious violators. In proposing an environmental crimes program, the Department found broad citizen, business, and government support for criminal enforcement of extreme environmental violations, and the State passed an Environmental Crimes Act in 1993. The most difficult problems we encountered involved facilitating communication between the various parties and interests involved. In an effort to improve the communications and efficiency of the program, the Department initiated an ongoing training program for inspectors, criminal investigators, and prosecutors. In addition, the Department's Environmental Crimes Coordination Team meets weekly to discuss developments in current investigations and prosecutions. In our first full year of operation, Oregon investigated over 50 environmental crimes which have led to the criminal sentencing of numerous individuals and corporations. At a time when there is a government movement to conduct more technical assistance with less-culpable violators, Oregon believes that a strong environmental crimes program is necessary to any successful environmental protection strategy.

### **1 INTRODUCTION**

Before 1993, Oregon had little authority or capability to criminally prosecute violators of environmental law. At that time, Oregon could only seek misdemeanor penalties, which are the least severe punishments, for even the most extreme environmental violations. Furthermore, the State lacked the needed agency infrastructure to coordinate investigation and prosecution of environmental crimes. As a result, there was virtually no criminal prosecution of any kind of environmental violation.

Today, Oregon has some of the toughest environmental crime statutes in the country, providing for felony punishments up to fifteen years in prison. These statutes are administered by the Oregon Department of Environmental Quality with assistance from state and local coordination teams which provide direction for, and augment communication between, the environmental regulators, county emergency response teams, law enforcement officers, and

criminal prosecutors. Although the various parties are still resolving the boundaries of their roles in the process, environmental crimes are now aggressively investigated and prosecuted in Oregon.

## **2 HISTORY AND THE NEED FOR AN ENVIRONMENTAL CRIMES PROGRAM**

Oregon has a national reputation for being a leader in environmental protection. Our citizens take great pride in the beauty and livability of the State. We have a strong environmental ethic and a tradition of supporting environmental protection. Oregon was the first state to enact a "Bottle Bill" requiring a deposit for beverage containers to encourage recycling, and has one of the most successful plastic recycling programs in the country. Oregon was also the first state to enact a comprehensive land-use-planning program to protect valuable farm and forestry land from over-development. We have continued our quest for environmental protection by passing laws, in 1989, to reduce the use of toxic chemicals and prevent pollution.

The State has obtained authorization from the United States federal government to administer, in Oregon, most of the federal environmental programs including the Clean Air Act, Clean Water Act, and the Resource Conservation and Recovery Act. The State legislature has adopted numerous environmental statutes governing air pollution, water pollution, hazardous and solid waste management, and contaminated-site cleanup that, in many cases, are more stringent than their federal counterparts. These laws are administered by the State's Department of Environmental Quality and its rule-making and adjudicative body, the Environmental Quality Commission.

In 1971, the Oregon legislature adopted an enforcement mechanism designed to punish and deter violators of environmental law. Since then, civil administrative enforcement has been the State's primary enforcement tool. In that civil arena, Department of Environmental Quality inspectors gather evidence of violation, and advise the agency's environmental law specialists who handle the legal aspects of assessing fines and issuing legal orders to bring violators back into compliance with the environmental laws. The process has worked well, as demonstrated by the low rate of recidivism among violators.

However, by 1992 Department of Environmental Quality began to document some environmental violations where violators had knowingly disregarded the law and disregarded the significant danger they caused to public health and the environment. Examples of these extreme violations included: covert dumping of hazardous waste onto public and forest land, intentionally by-passing pollution control equipment to discharge industrial wastes into rivers, falsifying discharge monitoring reports from required compliance self monitoring to conceal evidence of violation, and intentionally burning PCB-contaminated waste on public land. Environmental regulators, law enforcement officers, and citizens all agreed that the civil enforcement process was not effective in deterring these extreme types of violations and violators, and that a stronger, criminal enforcement process was needed.

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### 3 DEVELOPING THE LEGISLATIVE CONCEPT

#### 3.1 Garnering support

The initial step in developing a state environmental crime program was for Department of Environmental Quality to work with all the interested parties in defining the goals and structure of the program. Support from a wide variety of interested parties was necessary to convince the state legislators that the program was needed. Department of Environmental Quality also wanted to obtain commitments from the agencies and individuals who would be involved in administering the program. Department of Environmental Quality first approached the Oregon Attorney General to inquire about joining forces to develop proposed environmental crimes legislation. Department of Environmental Quality also met with the Oregon District Attorneys' Association (the criminal prosecutors' network) and Oregon State Police to describe environmental crimes, Oregon's existing statutes, and the need for police involvement. Having convinced these parties that an environmental crimes program was needed, Department of Environmental Quality, the Attorney General, the District Attorneys and Oregon State Police formed a group to gather information, define roles and responsibilities, prepare draft legislation, and garner support of the citizenry.

Three factors were especially persuasive in building a broad base of support among citizens and the business community. First, nearly everyone believed that extreme violation of environmental law was criminal conduct, especially when violators knowingly disregarded public health in obtaining an unfair economic advantage over their competitors. Second, the federal Congress had enacted the Clean Air Act amendments of 1990 which authorized the states to administer their own air-quality permitting programs. However, as a prerequisite for the federal authorization, states were required to have authority to enforce air quality laws through the criminal process. The primary organization representing industry (Associated Oregon Industries) wanted the State to run the air quality program instead of the federal government and was prepared to help build an environmental crimes program to satisfy the authorization requirements. Representatives of this industry organization also believed that the most egregious environmental violations should be treated criminally. Last, Oregon was one of only five states in the country with no felony authority for environmental violations. This was a key statistic — legislators and others wanted to prevent Oregon from becoming a haven for environmental criminals.

#### 3.2 Defining the elements of the program

In the initial stages of developing an environmental crimes program, Department of Environmental Quality laid out short- and long term strategies for bringing together the necessary elements. We examined environmental-crimes programs administered in other states, and concluded that the elements necessary for a successful environmental crimes program would be:

- Environmental statutes and regulations that are written clearly.
- Enforcement authority that includes felony provisions.
- Law enforcement officers who are assigned to investigate environmental crimes and are trained in environmental law.
- Department of Environmental Quality (DEQ) field inspectors who are authorized to work on environmental crimes, trained in criminal law and procedure, and have access to adequate laboratory resources to handle the greater sampling analysis needed for a criminal prosecution.

- Criminal prosecutors who are trained in environmental law; and prepared to bring charges against extreme environmental violators.
- Prosecutors should have a procedure and a guidelines document for determining whether a given environmental violation will be criminally prosecuted.
- The environmental crimes program must have guidelines to clearly define the roles of the involved parties, their responsibilities, and the division of authority for making decisions during investigation and prosecution.
- Before undertaking a criminal investigation and prosecution, the various agencies involved should reach an understanding concerning their relative roles and responsibilities.

### 3.3 Enacting the environmental crimes package

The Department of Environmental Quality, the District Attorney Association, the Attorney General, and State Police co-sponsored the Environmental Crimes bill during the 1993 Oregon Legislative Session. The industry association introduced its own bill addressing environmental crimes. The co-sponsors of both bills, along with representatives of municipalities, small business, labor and other groups worked together during the legislative session to create comprehensive environmental crimes statutory package. After several months of negotiations, and public hearings in front of legislative committees, the participating parties reached a consensus on the bill's language. Subsequently, both the Democratic-controlled Senate, and the Republican-controlled House passed the bill with near unanimous support (See Section 8 below). At the signing ceremony, former Oregon Governor Barbara Roberts said that the Act sends a clear message that violations of the environmental laws will not be tolerated in this state.

## 4 STRUCTURE OF OREGON'S ENVIRONMENTAL CRIMES PROGRAM

### 4.1 The Department of Environmental Quality field inspectors

Department of Environmental Quality has approximately 300 field inspectors who routinely inspect facilities, identify violations of environmental law, and refer those violations to Department of Environmental Quality's Enforcement Section for civil enforcement. Although Department of Environmental Quality acquires some information about potential environmental crimes from citizen complaints, the majority of the leads come from Department of Environmental Quality inspectors who uncover extreme violations during the course of their civil inspections. Involving the field inspectors in the process has been one of the most problematic, and most rewarding, aspects of the program, as will be described more fully below.

### 4.2 The criminal law enforcement officers

The Legislature funded one full-time Oregon State Police Officer to work with Department of Environmental Quality regulators on the investigation of environmental crimes. That officer was hired in January 1994, and is physically located at Department of Environmental Quality's Enforcement Section office. In September 1993, the United States Environmental Protection Agency (U.S. EPA) concurrently established an environmental crimes office in Oregon which is now staffed by three full-time criminal investigators. The U.S. EPA criminal investigators are

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also located in Department of Environmental Quality's offices and work closely with the state criminal investigator and field inspectors. The close physical proximity of the law enforcement officers and the civil regulatory inspectors has enhanced communication between them and resulted in a better, more holistic understanding of the environmental laws and the environmental crimes process by all parties.

#### 4.3 The environmental crimes coordination team

Department of Environmental Quality realized from the beginning that an Environmental Crimes Coordination Team would be needed to maintain and promote communication between the participants. The Team consists of representatives of Department of Environmental Quality, Oregon State Police, the federal Environmental Protection Agency, the Oregon Department of Justice, and the Federal Bureau of Investigation. Once a week, the Team meets to discuss environmental crimes. The Team discusses whether to initiate a full criminal investigation based on evidence supplied by Department of Environmental Quality inspectors and information obtained through citizen complaints. In some cases the Team, using investigative discretion, determines that the alleged conduct does not meet the criteria as an environmental crime and that the Department of Environmental Quality inspector should proceed with a civil enforcement action. In other cases, the Team determines that the state or federal law enforcement officers should initiate a criminal investigation. The Team also discusses the progress of ongoing investigations and strategies based on resource availability and the particular needs of the investigation. Any decision to commit Department of Environmental Quality's resources to a criminal investigation is made after consulting with the Department of Environmental Quality Director.

#### 4.4 Local task forces

Because much of the prosecution of the environmental crimes is done by the county district attorneys, several counties have developed their own cooperative agreements to define responsibilities and expectations of the parties who may be involved in the discovery, investigation, and prosecution of environmental crimes in their community. The first such agreement was organized by the Multnomah County District Attorney's Office, which oversees the prosecution of crimes in Portland, Oregon's largest city. The District Attorney's Office brought together representatives from the fire departments, local governments, Department of Environmental Quality, Oregon State Police, and County Sheriff to coordinate the response to the discovery of environmental violations. The agreement described each agency's commitment to the environmental crimes program and established procedures for responding to environmental crimes. Other counties are currently organizing similar environmental crimes and first response teams.

#### 4.5 Department of Environmental Quality criminal enforcement criteria

Once Department of Environmental Quality had obtained the authority and infrastructure to investigate environmental crimes, and had developed a working relationship with the state and federal criminal investigators, Department of Environmental Quality began to examine the violations occurring in the State and define which environmental violations are so extreme that a criminal investigation is warranted. The result was the development of the "Department of Environmental Quality Criminal Enforcement Criteria." These criteria were designed to help Department of Environmental Quality inspectors define which environmental violations could meet the elements of a crime and therefore should be elevated for a possible criminal investigation. The criteria fall into three categories:

- History of noncompliance — If the violator has a history of violating the environmental laws, criminal enforcement may be warranted as a punishment and deterrent.
- Violator's culpability — A criminal investigation may be warranted if the violator was intentional, deceitful, deliberate or dishonest in committing the violation.
- Results of the conduct — Violators who cause a threat to public health or environmental damage are more likely to be prosecuted criminally than violators whose acts did not cause actual harm or threat of harm.

Our experience has shown that case selection is a critical element of the environmental crimes program. These criteria provide a framework for Department of Environmental Quality inspectors to determine whether conduct should be considered criminal, and whether the agency should employ some of its investigative resources to investigate a particular violation.

Using this criteria, Department of Environmental Quality inspectors have discovered and documented numerous environmental violations that have been criminally investigated and prosecuted. For example, Department of Environmental Quality pursued criminal investigation and prosecution of an electroplating operation because the operation endangered the public health of a residential neighborhood by intentionally abandoning a large volume of highly toxic hazardous wastes to avoid the costs of lawful and safe disposal. In a similar case, Department of Environmental Quality pursued criminal sanctions against a chrome-plating business that repeatedly dumped its chrome waste on the ground, contaminating residential drinking water wells with dangerous chemicals. In another case, Department of Environmental Quality sought a 51-count felony indictment of an underground storage tank clean-up business that repeatedly submitted falsified laboratory reports to Department of Environmental Quality in an effort to conceal evidence of its misconduct.

## **5 PROBLEMS IN EXECUTING THE PROGRAM AND OREGON'S SOLUTIONS**

### **5.1 Institutional bias against criminal enforcement**

Department of Environmental Quality's mission is to restore, enhance and maintain the quality of Oregon's environment, and Department of Environmental Quality has implemented its mission by bringing industry, small businesses, municipalities and others into compliance with the environmental laws. Historically, Department of Environmental Quality has promoted compliance through education and technical assistance programs in conjunction with its civil enforcement actions. As a result, some Department of Environmental Quality inspectors have had difficulty moving away from the cooperative compliance approach to pursuing violators criminally. Biases against criminal enforcement can also develop because criminal cases take a long time to prepare and complete. The inspectors are used to collecting evidence sufficient to prove a violation by the "preponderance of the evidence," needed in a civil case, and may not be used to collecting the more-rigorous and detailed evidence needed to meet the "beyond a reasonable doubt" burden of proof for a criminal conviction. Also, few Department of Environmental Quality inspectors have experience in participating in the criminal justice system. They may feel uncomfortable with the complex legal issues that arise during a criminal proceeding such as the Constitutional search and seizure requirements, confidentiality issues and prosecutorial discretion.

In an effort to overcome these biases, Department of Environmental Quality has organized training events for civil regulators to meet with the Environmental Crimes Coordination Team as well as criminal prosecutors and law enforcement officers. During these workshops we have explained the types of conduct considered criminal, and have introduced the inspectors to the criminal justice system so that they would have a picture of how the case should progress. We have shown the inspectors how their involvement in the crimes program is absolutely necessary to its success because they are the most likely individuals to observe criminal conduct by virtue of their considerable exposure to environmental compliance in the regulated community. Department of Environmental Quality inspectors have also attended national and regional criminal enforcement training programs. Progress has been made in developing Department of Environmental Quality inspectors' interest in pursuing environmental crimes. Ongoing training programs and other educational opportunities are vital to developing informed and prepared participants in the environmental crimes program.

## 5.2 Need for cross-training

Each of the primary players in the environmental crimes program has a defined area of expertise. The civil regulators understand the science behind the law and the technical requirements of compliance, but generally do not know the legal aspects of a criminal investigation and prosecution. Laboratory personnel understand the required sampling and analysis protocols. Criminal investigators know the legal aspects of conducting a criminal investigation, and they have experience in assisting prosecutors, but they generally do not know the science or the technical aspects of the law. Criminal prosecutors have legal procedure and litigation experience, but in general do not have the science background to fully understand the technical aspects of environmental laws. The communication problems that can result from these non-overlapping areas of expertise can cause breakdown of the program's system. If the criminal investigators do not understand the science or the consequences of a violation, they are less likely to see it as a crime. If the prosecutors feel over-burdened by the time needed to study the technical aspects of the complex environmental laws, they are less likely to budget time for an environmental crimes prosecution.

Because the program is new, many of the parties lack the experience of working with each other. Most of the communication problem can be solved by through educational cross-training and by facilitating discussion and communication between the parties. This has been a prime goal of the Environmental Crimes Coordination Team.

## 6 STATUS OF THE PROGRAM

### 6.1 Successes

Since its inception, the Environmental Crimes Coordination Team discussed almost 200 potential crimes and referred over 50 to the law enforcement officers for criminal investigation. Of these, 12 hazardous waste cases, 4 asbestos cases, 5 water quality cases and an underground storage tank case have been referred to state and federal prosecutors. So far, these have led to the charging of approximately 20 environmental crimes. As a result of subsequent misdemeanor and felony prosecutions, criminal sanctions imposed included the following:

- A husband and wife team, respectively the president and secretary of a plating company, performed plating operations on contract without properly disposing of any of the resulting waste sludges. When under investigation, the pair fled, abandoning 43,000 gallons of hazardous wastes and a number of unfulfilled contractual obligations. The pair were found guilty of six counts of illegal storage and disposal of hazardous wastes in the first degree, supplying false information to a state agency, and theft. He received a sentence of 14 months jail, 3 years supervision, and \$18,000 in restitution to injured parties. She received a sentence of 120 hours community service, 5 years probation, and \$5,000 in restitution to injured parties.
- A corporation and its president pled guilty to two counts of unlawful disposal of hazardous wastes when it was discovered that they had dumped chrome-plating solutions and contaminated an aquifer in a residential area. The plater knew the aquifer was contaminated, and began to supply bottled water to a neighboring resident, but did not tell her that her well-water was contaminated. In a negotiated settlement, the corporation and president agreed to pay a continuing fine of \$3,000 per month plus 40% of the future profits until the cleanup is completed and all costs of cleanup are repaid. The agreement also required 100 hours of community service, 5 years probation, and \$30,000 in restitution to the injured neighbor.
- A corporation repeatedly discharged raw sewage onto the grounds of a mobile-home park it operated, in flagrant violation of water quality law and of prior warnings it had received. The corporation pled guilty to water pollution in the second degree, and was sentenced to 1 year probation and \$3,500 in fines.
- A machine-shop owner repeatedly burned and otherwise unlawfully disposed of hazardous wastes. He pled guilty to a hazardous waste misdemeanor and the court ordered him to remediate the contamination he caused and bring the facility into full compliance with hazardous waste law.
- A fuel and used oil processor was discovered illegally accepting hazardous wastes and illegally blending hazardous wastes for energy recovery in a boiler. In settlement, the corporation agreed to bring the facility into compliance, to conduct studies and submit compliance reports, to pay a \$133,000 penalty, and to 4 years of probationary oversight. The processor has violated the terms of its probation and the Department is currently seeking additional sanctions.
- A corporation and its president were found guilty of illegal disposal of hazardous waste paint and were sentenced to 6 months home detention, a \$5,000 fine, 150 hours community service, \$30,000 in restitution to injured parties, and 5 years probation.

## 6.2 Future directions

Currently in the United States there are strong incentives to move away from total reliance on the historical enforcement approaches and to emphasize technical assistance and cooperative pollution prevention strategies. President Bill Clinton and Vice President Al Gore have initiated a number of new non-regulatory approaches to achieve compliance. Two such

federal projects are the technical assistance centers for small businesses, and the new Project XL, where the federal government will allow companies that demonstrate superior excellence in environmental leadership to have flexibility in meeting regulatory requirements. State and local governments also have implemented new and creative ways to protect the environment, for example Oregon's Environmental Partnership with Oregon Communities Project. These programs are not intended to roll back the progress we have made. They are intended to allow us to make wiser and more efficient use of our resources, and to allow us to achieve our environmental goals more expeditiously by integrating pollution control into the process.

While we recognize that these new approaches and programs are helpful in bringing the regulated community into compliance, we believe that a strong enforcement program is necessary for any environmental compliance strategy. Our experience has also demonstrated that criminal enforcement of environmental laws is necessary to deter extreme environmental violations that are committed intentionally, repeatedly, deceitfully, or threaten public health and the environment. Oregon's environmental crimes program will continue to build on the institutional resources currently in place.

We have gained valuable experience by reviewing potential criminal cases with our civil inspectors, criminal investigators and the legal community. We will continue to define which violations should be treated through criminal prosecution and which cases will be handled with the traditional civil enforcement approach. We also will continue to improve our investigatory coordination by defining roles and responsibilities of the various participants and by taking the time to develop case specific investigator strategies. Future emphasis will be placed on developing case settlement strategies addressing issues such as cleaning up contaminated properties, recovering the state's costs and monitoring the violators' compliance with the environmental laws.

## **7 CONCLUSION**

Designing, establishing and implementing an environmental crimes program is a complicated task because of the diversity of necessary involved parties and interests. However, in Oregon, we found broad citizen, business, and government support for criminal enforcement of extreme environmental violations. In 1993, the State established a statutory basis for its criminal program. During 1994, and continuing through today, the Department has worked with the various state and local agencies to develop a well-integrated, coordinated and efficient system through which to discover, investigate and prosecute environmental crimes. The most difficult problem we encountered is in facilitating communication between all the involved agencies and individuals. Our solution to this problem has been the establishment of state and local coordination teams. We have overcome the obstacles to implementation, and our program has been successful. In our first full year of operation, we investigated over 50 environmental crimes which have led to the criminal sentencing of numerous individuals and corporations. At a time when there is a government movement to conduct more technical assistance with less-culpable violators, Oregon believes that a strong environmental crimes program is necessary to any successful environmental protection strategy.

**ANNEX: OREGON'S ENVIRONMENTAL CRIMES STATUTES****1 HAZARDOUS WASTE CRIMES****1.1 Unlawful disposal, storage, treatment or transportation of hazardous waste in the second degree (Oregon Revised Statutes (ORS) 468.922, 468.929)**

1. Person commits the crime of unlawful disposal, storage, treatment or transportation of hazardous waste in the second degree if the person, in violation of any hazardous waste statutes, rules, licenses, permits or orders, knowingly treats, stores, disposes of or transports hazardous waste.
2. Unlawful disposal, storage, treatment or transportation of hazardous waste is a Class B misdemeanor punishable by a fine up to \$10,000 and one year imprisonment.

**1.2 Unlawful disposal, storage, treatment or transportation of hazardous waste in the first degree (ORS 468.926, 468.931)**

1. A person commits the crime of unlawful disposal, storage, treatment or transportation of hazardous waste in the first degree if the person, in violation of any hazardous waste statute, rule, license, permit or order, knowingly disposes of, stores, or treats hazardous waste and:
  - a. As a result, recklessly causes substantial harm to human health or the environment.
  - b. Knowingly disregards the law in committing the violation.
2. Unlawful disposal, storage, treatment or transportation of hazardous waste in the first degree is a Class B felony punishable by a fine up to \$200,000 and 10 years imprisonment.

**2 AIR POLLUTION CRIMES****2.1 Unlawful air pollution in the second degree (ORS 468.936)**

1. A person commits the crime of unlawful air pollution in the second degree if the person knowingly violates any applicable requirement of the air quality statutes, a permit, rule or order.
2. Unlawful air pollution in the second degree is an offense punishable by a fine of up to \$10,000.

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## 2.2 Unlawful air pollution in the first degree (ORS 468.939)

1. A person commits the crime of unlawful air pollution in the first degree if the person, in violation of any air quality statutes, rule, permit, order or applicable requirement, knowingly discharges, emits or allows to be discharged or emitted any air contaminant into the outdoor atmosphere and:
  - a. As a result, recklessly causes substantial harm to human health or the environment.
  - b. Knowingly disregards the law in committing the violation.
2. Unlawful air pollution in the first degree is a Class B felony punishable by a fine up to \$200,000 and 10 years imprisonment.

## 3 WATER POLLUTION CRIMES

### 3.1 Unlawful water pollution in the second degree (ORS 468.943)

1. A person commits the crime of unlawful water pollution in the second degree if the person, with criminal negligence, violates any water quality statute, rule, standard, license, permit or order.
2. Unlawful water pollution in the second degree is a misdemeanor punishable by a fine up to \$25,000 and one year imprisonment.

### 3.2 Unlawful water pollution in the first degree (ORS 468.946)

1. A person commits the crime of unlawful water pollution in the first degree if the person, in violation of any water quality statute, rule, standard, license, permit or order, knowingly discharges, places or causes to be placed any waste into the waters of the state or in a location where the waste is likely to escape or be carried into the waters of the state and:
  - a. As a result, recklessly causes substantial harm to human health or the environment.
  - b. Knowingly disregard the law in committing the violation.
2. Unlawful water pollution in the first degree is a Class B felony punishable by a fine up to \$200,000 or 10 years imprisonment or both.

## 4 OTHER ENVIRONMENTAL CRIMES

### 4.1 Environmental endangerment (ORS 468.951)

1. A person commits the crime of environmental endangerment if the person:

- a. Knowingly commits the crime of unlawful disposal, storage, treatment or transportation of hazardous waste in the first degree, unlawful air pollution in the first degree or unlawful water pollution in the first degree.
  - b. As a result, places another person in imminent danger of death or causes serious physical injury.
2. Environmental endangerment is a felony punishable:
- a. If the defendant is an individual, by imprisonment of not more than 15 years, a fine of not more than \$1,000,000 or both.
  - b. If the defendant is other than an individual, by a fine of not more than \$2,000,000.
  - c. In the case of a second or subsequent conviction under this section, by imprisonment of not more than 30 years, a fine of not more than \$5,000,000 or both.

#### 4.2 Supplying false information to agency (ORS 468.953)

1. A person commits the crime of supplying false information to any agency if the person:
  - a. Makes any false material statement, representation or certification, notice, plan, record, report or other document required by any provision of Oregon's environmental laws or rules.
  - b. Omits any material or required information, knowing it to be required, from any document described in paragraph (a) of this subsection.
  - c. Alters, conceals or fails to file or maintain any document described in paragraph (a) of this subsection in knowing violation of any provision of Oregon's environmental laws.
2. Supplying false information is a Class C felony punishable by a fine up to \$100,000 and five years imprisonment.

#### 4.3 Refusal to produce subpoenaed material (ORS 468.956)

1. Refusal, without good cause, to produce books
  - a. Subpoenaed materials.
  - b. Materials otherwise required to be submitted to any agency under the environmental statutes.
2. Refusal to produce material is a Class A misdemeanor punishable by a fine up to \$5,000 and one year imprisonment.

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## TARGETING AND CRIMINAL ENFORCEMENT

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### SUMMARY

Administrative authorities prefer enforcement by negotiation and persuasion, which can be described as 'cooperative enforcement'. Prosecuting authorities have little enthusiasm for this approach. They prefer a resolute approach, a punitive approach. The gap can be bridged by the use of what is known as 'responsive enforcement'. In principle responsive enforcement is cooperative, but has criminal law in the background. It is possible to switch to punitive enforcement if the reasons for the violation make this necessary.

### 1 INTRODUCTION

The authorities in the Netherlands have now had some 20 years experience with the enforcement of environmental legislation. There have been many problems, there still are some problems, and there are still some problems yet to be encountered. Even so, a lot has been learned in the course of the years, and a lot of progress has been made. The first few years were characterized by what is known as *cooperative* enforcement. Enforcement was above all approached in an administrative way, using negotiation and persuasion. Criminal law was then seen as the ultimate weapon. This philosophy was abandoned following a number of major environmental scandals.<sup>1</sup> Criminal law was also brought to bear, and as a result enforcement took on a more *punitive* nature. However both forms of enforcement still occasionally come into conflict with each other.

### 2 COOPERATIVE ENFORCEMENT

Administrative authorities in the Netherlands usually make use of cooperative forms of enforcement. They don't like to threaten companies - and there are good arguments for not doing so.

An administrator realizes that there are interests other than just those of the environment. This is quite understandable, as an administrator has broader responsibilities. There are also other matters, such as the number of jobs provided by the company. Ultimately violation of the environmental regulations is always frowned on by administrators, but this poor state of affairs is always compensated. The same company also brings prosperity, and that is as such a good thing. A company has to be way out of line before administrators decide to institute legal proceedings. These are some of the factors which determine the basic attitude of the administrators towards enforcement.

First of all attempts are made to persuade the company involved to better itself, and if this does not work then the authorities are quickly inclined to negotiate. Attempts are then made to find a compromise, and the authorities may even be prepared to permit companies (temporarily) to break the rules. In other words, violations are tolerated (condoning).

When administrators do decide to act, then this has only one purpose: to end the violation. This is also the responsibility of the authorities. The means of enforcement the authorities have at their disposal have been designed with this purpose. In The Netherlands these include a measure which entails a form of administrative coercion.

Termination of the violation is achieved by the authorities at the cost of the company concerned. The same is in fact also true for the penalty which the authorities impose on a company when ordering the company to end the violation within a specified time (which can also be immediately), under the forfeit of a specified sum. According to Dutch jurisprudence the amount of this penalty should be just sufficient to compel the offender to conform with the regulations. The penalty shall not be used as a means of punishment.<sup>2</sup> In practice penalties are not usually collected when the company has finally ended the violation - even when the time which had been granted to do so has been greatly exceeded.<sup>3</sup>

The above shows that no account is taken of the economic advantage enjoyed by the offending company by not complying with environmental regulations, for example the postponement of a specific investment for longer than necessary. As a result violation of the environmental regulations is regularly profitable in the long run - even when the regulations have been enforced. It's almost an invitation to break the rules.

Furthermore the violation of the environmental regulations is not thought of as a criminal act within the subculture of the business community, government, or the authorities. Environmental offences are often thought of as justifiable because they are economically necessary - or in some circles businessmen admire them as being a smart way of doing business. In this context an appeal, or procedures dealing with objections, is considered as nothing more than a difference of opinion in business affairs between a company and the authorities.<sup>4</sup> Non-compliance with the regulations is accepted to a certain degree.

An important advantage of this kind of enforcement is that communication channels with the company are kept open. This results in a thorough knowledge of the company, and the company can also be advised how it can best comply with the regulations. Enforcement can be tailored to the situation, in particular for those violations which are the result of ignorance, always provided that the company is also willing to comply with the regulations.

The most important disadvantage is the risk that the activities of the enforcers have little effect, as a result of the enforcers either allowing the company too much leeway, or by allowing themselves to be played along with, or both. Cooperative enforcement is based on a close and continuous relationship between the company and the enforcer. The resultant mutual dependence can frustrate other methods of enforcement. Cooperative enforcement can lead to partial, or even complete non-enforcement, as was shown in a number of notorious environmental scandals in the Netherlands. One example was the environmental disaster in the town of Lekkerkerk in which it transpired that the council had known for years that toxic waste was being dumped amongst the rubble on which a housing estate was later built. Another was the Uniser affair, which clearly demonstrated the impotence of the authorities when supervising and acting against the largest chemical waste processing company in the Netherlands.

Another important disadvantage is that cooperative enforcement readily leads to legal inequality, which in turn leads to distortion of competition. Enforcement is not a matter of course. Or, as explained above, enforcement is executed in a manner which partly depends on a number

of interests, and often interests other than those of the environment. Enforcement is also dependent on the individual relationship between the company and the relevant authority such as the municipality or province.

### 3 PUNITIVE ENFORCEMENT

Punitive enforcement attempts to ensure compliance with the regulations by tracking down violations, determining who is guilty, and finally punishing the offenders. Punitive enforcement is mainly carried out using criminal law. This is the responsibility of the Public Prosecutions Department, the police, and specialized investigation departments. These authorities also have their limitations. I'll discuss the strong points of criminal law first.

In principle the law is enforced without regard of the persons involved. 'Legal equality' must truly be almost part of the very genes of a Public Prosecutor! This is also why there is little understanding for those authorities that turn a blind eye to certain violations after they have balanced the various interests involved. This is also the reason for the past behaviour of the judicial authorities, when matters which did finally reach them were regularly dismissed because the authorities tolerated violation of the regulations by other companies in similar situations.

The emphasis of criminal law is on the imposing of sanctions and the deterrence of potential offenders. This form of enforcement would appear to be supremely suitable to situations in which the environmental regulations are violated in the pursuit of profits. Punitive enforcement increases the costs of the violation of the regulations, and as a result the offender might possibly decide not to repeat the offence - and potential offenders might decide not to take the risk.<sup>5</sup>

An important advantage is that not only companies (legal persons) but also the management can be prosecuted under criminal law. A legal person is in fact not much more than a framework under corporate law. Mistakes, or the decisions which result in environmental offences, are always made by individuals. Whether natural persons are prosecuted as well as the legal person obviously depends on the nature of the violation.

Another side of criminal law is that it reinforces the concept of 'right and wrong' in environmental legislation. Earlier it was explained that the violation of environmental regulations is sometimes thought to be a very clever way of conducting business, or at most a question of a difference of opinion with the authorities about business affairs. But if the Public Prosecutions Department decides to prosecute, then the more basic idea of "right and wrong" comes into play; an environmental offence becomes a criminal act. The Public Prosecutions Department has a "moral authority".<sup>6</sup> This is undoubtedly an important weapon in the fight against environmental crime. Companies are usually extremely sensitive about damage to their good name and their reputation, which also acts as a strong deterrent. In other words the power of criminal law is not just based on the effect of the sanctions on the offender; it also - and quite possibly especially - acquires its powers from the effect of publicity accompanying a criminal prosecution.<sup>7</sup>

At the same time this 'right and wrong' in criminal law is also its weakness. Criminal prosecution stigmatizes. There is a real risk that the organization will isolate itself from its surroundings. Communications with the company become difficult, and this can hinder the realization of structural improvements in the situation. In addition it also acts as a deterrent for the administrative authorities, and as explained above they were already unenthusiastic about this punitive approach. As a consequence there is little readiness to pass cases to the Public Prosecutions Department, which is consequently deprived of an important source of information. The administrative authorities have the command over the supply of information. It's very different from the situation where citizens report cases of breaking and entering or violent crime to the

Public Prosecutions Department of their own accord. It doesn't concern them. It should be remembered that environmental offences are usually perpetrated behind high fences and in distant industrial areas; or in any case far from extensively-populated areas. And it's not easy to establish whether there actually has been a violation. You can't see it from the colour of the waste water being discharged by the company. First of all measurements will have to be made; it should be realized that pollution is in fact permitted to a certain extent by virtue of the very licence itself. Citizens can't carry out measurements and they don't usually have the authority to do so. In other words we depend on the supervisory civil servants working for the authorities to establish whether a company has violated the regulations. And if those civil servants don't deliver, or don't give sufficient information, then the Public Prosecutions Department won't be able to carry out its responsibilities.

It's not just the fault of the administrative authorities that cases are not transferred to the Public Prosecutions Department. For a long time the Public Prosecutions Department and the police weren't exactly enthusiastic about tackling environmental offences. Undoubtedly reasons for this were unfamiliarity with the subject matter, and the complex regulations. However even those cases which actually were taken on didn't always end up with the result that might have been expected. The Public Prosecutions Department and the police still compare environmental offences too much to other more traditional forms of crime, such as breaking and entering, robbery, and dealing in drugs. As such a comparison of the various forms of crime is very wise, as it results in more balanced enforcement in the various areas, and consequently better legal equality. But at the same time there is also a tendency to trivialize the offence, which is in part due to the unfamiliarity with the subject matter. This isn't really very surprising as companies and their managements don't fit in with the traditional image of crooks.

Those cases which were however considered to be serious were then often treated in the same way as organized crime. To some extent this is still the case. The efforts of the authorities are then in particular aimed at dismantling a criminal organization. However environmental offences are usually perpetrated by normal bona fide organizations, and of course it is the intention that they - in a *cleaned-up* form - continue to exist.<sup>8</sup> Obviously Public Prosecutors appreciate this as well. None the less these kinds of cases all too often end in rather unimaginative prison sentences and (big) fines. Of course this is justifiable as such - but the environment is not always served by such an outcome. The authorities are especially interested in putting things back in order, the structural termination of the violation, and in the removal of the pollution.

#### **4 RESPONSIVE ENFORCEMENT**

In the preceding sections about cooperative and punitive enforcement I have described not only two very different strategies of enforcement, but also the two conflicting enforcement cultures of the administrative authorities and of the Public Prosecutions Department. A bridge must be built between the two cultures; and intensive efforts are being made to achieve this. As is also evident from other contributions to this volume, an enforcement structure has already been created in which the authorities, police and Public Prosecutions Department meet each other and come to agreement about enforcement matters. The structure provides for national, provincial, regional and local consultations. The agreements range from the making of programs to agreements about the approach in specific cases. This cooperation has already produced excellent results. This has allowed the police and the Public Prosecutions Department to take up an important position in the area of enforcement.<sup>9</sup> However there is still room for improvement. We can really make a leap forward if we can merge cooperative and punitive enforcement in

such a way that the advantages of both are kept, whilst the disadvantages are compensated as much as is possible. That's certainly possible. The solution is cooperative enforcement, with criminal law in the background: this is also known as responsive enforcement<sup>10</sup>.

Responsive enforcement is not a replacement for cooperative or punitive enforcement; on the contrary, it contains both forms. An exclusive choice of just one of these forms would be unwise. It is more a question of which combination of punitive and cooperative coercion is most appropriate to which situation. In each case the choice is made with the intention of matching the method of enforcement to the reason(s) for the violation. In this sense enforcement is a suitable *response* to the violation. It is also assumed that long term compliance is only guaranteed when environmental regulations are accepted, and have been secured by a learning process in the organization in question<sup>11</sup>.

Responsive enforcement can contribute to this process by a rather more inventive use of criminal law. I'll give a couple of examples<sup>12</sup>.

Environmental offences which can readily be explained by organizational matters such as communication problems, or insufficient management or supervision within the company, do not warrant a strict punitive reaction. Enforcement should be of a cooperative nature, but with criminal proceedings in the background. In concrete terms this means that the offence is first reported. This shows the company that the violation is being taken seriously. After the offence has been reported a cooperative approach can be adopted. The matter can then be suitably concluded with either dismissal or a settlement, under the condition that the organization takes the necessary measures required. For example the condition can be made that an external investigation or *environmental audit* be carried out at the cost of the offender. The Public Prosecutions Department can even agree with the company that a *corporate environmental management system* be drawn up.

However when there is a corporate culture such that environmental offences are caused by indifference, extreme slovenliness, or a lack of motivation, then it is reasonable that the Public Prosecutions Department acts as '*moral authority*' and gives a clear indication of disapproval by serving a writ on the company, or offering a settlement with an accompanying press release. As far as I am concerned a fine or even a prison sentence are not sufficient in this instance. The company must above all be confronted with the consequences of its actions, by compelling the company to repair the environmental damage which it has caused. Furthermore, the corporate culture must also be influenced from within, by stipulating that the company sets up a corporate environmental management system, or if needs be appoints *compliance officers*. If a company cooperates, then the Public Prosecutions Department should explicitly take this into consideration as mitigation. This should be reflected firstly in an appreciable reduction in the punishment and secondly, and if possible of even more importance, the new corporate ideals must be emphatically stressed in court during the public prosecutor's closing speech, or in a settlement with the accompanying press release.

When the regulations have been violated on the basis of a calculated cost-benefit analysis then a businesslike reaction is warranted. In addition to traditional punishment, together with the accompanying negative publicity, the profit accrued by virtue of the violation should also be forfeited. It is reasonable to expect that this kind of company would experience a 'soft' approach as a victory in business terms.

## 5 CONCLUSION

Responsive enforcement bridges the existing differences in culture between the authorities, the police, and the Public Prosecutions Department. The authorities are reassured that the continued existence of companies is not threatened. Nor is the relationship between companies and government broken off. On the contrary, responsive enforcement puts the organization in order by the enforcement of various kinds of self-regulation, such as audits, corporate environmental management systems, compliance officers, etc. As a result the necessary communication between companies and the authorities remains intact. All these activities take place with criminal law in the background. This is vital. If necessary, the Public Prosecutor can, as the moral authority, hit companies where it hurts, by attacking their reputation. If companies repent then they will always have the opportunity to clear themselves from (all) blame, and there is then no question of unnecessary stigmatization. In addition when criminal law is in the background - or in the foreground - then this will be advantageous to legal equality.

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5. Huisman, W., de Lange, A., et al., p. 34.
6. *Ibid.*, p. 39.
7. On the basis of section 7. sub-section g, of the Economic Offences Act a judicial decision is allowed to be made public.
8. It is then advisable to talk in terms of "crime in the organization".
9. For example, see *Zesde Voortgangsbericht*.
10. See also Huisman, W., de Lange, A., et al., p. 34ff.
11. *Ibid.*, p. 43.
12. The examples have been taken from: Huisman, W., de Lange, A., et al.

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## THE ENVIRONMENTAL CRIMINAL JUSTICE IN CHINA

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### SUMMARY

This paper is intended to introduce the legal basis for punishing environmental crimes in China. It reviews the penalties against the environmental crimes, the institutional structure of the judicial bodies in China and their responsibilities. The procedure for prosecuting and bringing suits for environmental crimes are also described. Finally it reviews the barriers to punish environmental crimes, the related causes and provides possible solutions to overcome these barriers.

### 1 THE LEGAL BASIS FOR PUNISHING ENVIRONMENTAL CRIMES IN CHINA

The Criminal Law of the People's Republic of China which was issued in 1979 and did not contain provisions concerning environmental crimes.

To strengthen the protection of the environment and punish the behavior of seriously polluting and damaging the environment, all the environmental laws in China now stipulate that the person responsible for environmental accidents shall be given certain penalties referencing provisions in the Criminal Law. For example, Article 43 of the Law of Water Pollution Prevention and Control of the People's Republic of China enacted in 1984 provided that the criminal penalty of the violators of this Law and those responsible for serious pollution accidents which cause losses of public and private properties or human deaths or injuries can be judged by referring to the related provisions in the Articles 155 or 187 of the Criminal Law. Similar provisions are also found in Article 38 of the Law of Air Pollution Prevention and Control of the People's Republic of China enacted in 1987 and Article 72 of the Law of Solid Waste Pollution Prevention and Control of the People's Republic of China issued in 1995. In the Law of Environmental Protection of the People's Republic of China issued in 1989, even though it does not clarify that the Articles 115 or 187 of the Criminal Law can be referred to in giving the penalties against environmental crimes, there is principle provision that the penalties can be measured in accordance with the related laws which refer to Article 3 of Water Pollution Prevention and Control Law and Article 38 of Air Pollution Prevention and Control Law. This also means Articles 115 or 187 and Article 79 of the Criminal Law can be referred to in the process of measuring the penalties because according to the related provisions in these environmental laws, the judiciary bodies can give the criminal penalty to the people causing pollution and damaging the environment by referring to Articles 115, 187 and 79 of the Criminal Law.

The Article 115 provides that those responsible for serious consequences and accidents in the manufacturing, storage, transportation and use of explosive, flammable, radioactive, hazardous and corrosive substance due to violation of regulations of management of these substances will be sentenced to imprisonment of less than three years and those responsible for more serious cases to an imprisonment of between 3 and 7 years.

The Article 187 stipulates that those government officials and workers responsible for major losses of property and damages to the interests of the State and the People due to neglect of their duties will be sentenced to an imprisonment of less than five years or criminal detention.

The Article 79 stipulates that the penalties against the crimes unclarified in the articles of this Law can be measured by referring to similar provisions in the articles of this Law and submitted to the People's Supreme Court for examination and approval. Similar to the crime of polluting and damaging the environment is Article 106 of the Criminal Law in which there is a provision that those responsible for major losses of public and private properties, serious human injuries and deaths by employing such dangerous means as setting fire, destroying water or flood works, explosion, poisoning and so on will be sentenced to an imprisonment of less than ten years, life imprisonment or death depending upon the nature of damages caused. And those responsible for the above crimes but not out of their detention will be sentenced to an imprisonment of less than seven years or criminal detention.

Above is the legal basis for the judiciary bodies in China to punish the environmental crimes. Some provisions are from the environmental laws and some from the Criminal Law which are put together to form a framework of environmental criminal justice of the present stage of China. This means that the judiciary bodies can judge as crimes the behavior of violating the environmental laws and causing serious environmental pollution and damages and measure the penalty accordingly by referring to the related provisions of the Criminal Law.

## **2 THE PENALTIES AGAINST ENVIRONMENTAL CRIMES IN CHINA**

Based on the above provisions in the laws related to the environmental crimes there are five penalties for environmental crimes in China: criminal detention, a fixed term of imprisonment, life imprisonment, death and paying fines.

Criminal detention means that the criminal is deprived of freedom of activity for a period from 15 days to at most 6 months. The criminal being detained will undertake assigned labor under the supervision of the public security authorities.

The criminal convicted of a set term of imprisonment will be deprived of freedom of activity ranging from more than 6 months to less than fifteen years and forced to work in prisons or on criminal reform farms under the supervision of the criminal reform authorities.

Life imprisonment is defined as a penalty to deprive the criminal of freedom of activity and force them to work in prison for their whole life.

Death penalty means that the criminal will be executed.

In minor cases, the people's court will require the criminal to pay for a certain amount of fine.

But in practice, the judiciary bodies seldom apply to the above penalties because the judicial personnel's have a great deal of difficulty in measuring the penalties against the behavior of polluting and damaging the environment by analogy or reference to similar provisions of the Criminal Law, which is the practice not easy for them to master. In addition, in most cases, the environmental criminal is the legal person and the above penalties except paying the fine can be applied only to the individual. The regulation on paying fines for the environmental crimes will go into effect from April 1, 1996.

In addition to the above penalties, the Criminal Law provides some non-criminal punishments. For example, Article 31 of the Criminal Law provides that the criminal responsible for economic losses of victims of the crime will make compensations for the losses besides criminal penalty. Compensating for the economic losses caused is the civil punishment the

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court force on the criminal after the criminal trial on the basis of the amount of losses the victim suffers. To those committing misdemeanors which can be exempted from criminal punishment, Article 32 of the Criminal Law stipulates that the person responsible will be given the punishment ranging from apologies, compensation for losses to administrative punishment. The three main non-criminal punishments: a) compensation for losses; b) administrative punishment; and c) apologies and receiving instructions can be applied to the environmental crimes.

### **3 THE ENVIRONMENTAL JUDICIARY BODIES IN CHINA AND THEIR RESPONSIBILITIES**

The environmental judiciary bodies in China include the public security authorities, the people's procuratorate, the people's court and the criminal institution.

#### **3.1 Public security authorities**

The public security authorities are the government administrative bodies responsible for protection of the security of the public and the society. Their specific responsibilities in the judicial activities concerning the environmental crimes are to investigate the cases of environmental crimes and exercise the power of criminal detention, arresting and pretrying the criminal.

#### **3.2 The people's procuratorate**

The people's procuratorate is the legal supervisory body to exercise the power of procuration on the behalf of the State. It is responsible for approving the arrest, initiating public prosecution and supervising the trial by the people's court and the execution of the court decision by the criminal reform institution.

#### **3.3 The people's court**

The people's court is to exercise the power to try the cases. So is their responsibility in the trial of environmental crimes.

#### **3.4 The criminal reform institution**

The criminal reform institution is the body to execute the court decision. They will categorize the criminals according to the court verdicts and reform and educate the criminals and supervise their labor.

### **4 THE PROCEDURE OF PROSECUTING THE ENVIRONMENTAL CRIMES**

According to the Criminal Procedure Law of China, to prosecute and punish the environmental crimes shall go through the following five phases: putting the case on file, investigating, initiating public prosecution, trial and execution of the court decision.

#### 4.1 Putting the case on file

All the government bodies, groups, institutions, enterprises and individuals have the right as well as the obligation to inform the public security authorities about the behavior or the suspect of causing environmental pollution or damages. And the public security authorities should respond immediately after receiving the report and information and put the case on file after the preliminary examination of the case if they think there is the need to prosecute the criminal based on the criminal fact.

#### 4.2 Investigation

The public security authorities shall collect the evidence and identify the criminal facts and the criminals after the case is put on file.

#### 4.3 Initiating public prosecution

Whether the case can be prosecuted or exempted from prosecution or not shall be examined and decided by the people's procuratorate. After the examination, the people's procuratorate think the criminal facts of the accused have been identified and the comprehensive evidence collected and shall initiate public prosecution at the people's court if they decide the case should be prosecuted.

#### 4.4 Trial

After receiving the prosecution of the environmental crimes by the people's procuratorate, the people's court shall first of all examine the case and try it with the presence of the public if they think the criminal facts have been identified and full evidence collected. In the process of the trial, the court shall go through the procedures of court investigation, court debate, statement of the accused and discussion of the court decision and shall declare whether the accused is guilty or innocent and give appropriate penalties if they decide the accused is guilty.

#### 4.5 Execution of court decision

The court decision will be executed after it has legal effect. The death penalty shall be executed by the people's court. To the criminals convicted of the suspended execution of death penalty for two years, life imprisonment, fixed term of imprisonment, or criminal detention, the people's court shall send the verdicts or notice to prisons or criminal reform institutions for execution. The people's court shall force the criminal to pay for fines if he or she is given fine penalty and fails to pay fines within a fixed time.

### **5 BARRIERS TO PUNISH ENVIRONMENTAL CRIMES IN CHINA AND PROPOSED SOLUTIONS**

There are few cases of environmental crimes which have been punished in China. Seen from the statistics in China Legal Yearbook, there is no yet statistics about cases of environmental crimes. According to the statistics done by National Environmental Protection Agency of China, there happened to be 3001 accidents of environmental pollution and damage caused by the enterprises above the county level in 1994, including 141 serious major accidents. In accordance with the environmental laws, those responsible for serious environmental pollution accidents

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should be given criminal penalties by referring to the related provisions in the Criminal Law. In actuality, the majority of cases were given administrative punishments or ended in making compensations rather than criminal penalties.

## 5.1 The barriers to punish environmental crimes

There are two reasons for failing to punish those seriously polluting and damaging the environment.

### 5.1.1 The barriers from imperfect environmental legislation

First, in the Criminal Law of China, there are no yet specific provisions which define the environmental crimes and measure the penalties against the environmental crimes. At present, the penalties against the behavior of seriously polluting and damaging the environment can be measured only by referring to the related provisions in the Criminal Law. This practice poses a great deal of difficulty to the judiciary bodies in applying to the similar provisions because there exist great differences between environmental crimes and other categories of crimes in the subject and object of crimes and subjective and objective components of crimes if seen from the content of crimes. The crimes of poisoning, causing major accidents due to violation of the regulations on management of hazardous substances and neglect of duties stipulated in Articles 106, 115, and 187 of the Criminal Law are difficult to be applied to all the behavior of polluting and damaging the environment. Therefore, in most cases, the judicial personnel will not judge environmental pollution and damage as crimes and put them on file when they examine the cases after they are reported.

Secondly, the existing penalties except paying fines provided by the Criminal Law and environmental laws can be applied only to the individual rather than the legal person which is the main part of environmental crimes. Therefore, few of the existing criminal punishments can be applied to environmental crimes.

Thirdly, the Chinese laws of environmental crimes punish only the criminals whose behavior has produced certain consequences dangerous to the society and the public rather than those whose behavior has not produced certain consequences but has the potential to bring about certain dangerous consequences and those who have violated the law but not brought about certain dangerous consequences. According to the provisions in the Law of Environmental Protection, only those who have caused serious environmental pollution accidents and major losses of property and human death and injury can be given criminal penalties by analogy to the related provisions of the Criminal Law. To those whose behavior has not but has the long-term potential to damage the environment and harm human health, such as illegal disposal of hazardous substance, no criminal penalties will be given to them. Such legal practice does not fit in with the principle of prevention as priority measure for environmental protection and narrows the range of environmental justice.

### 5.1.2 The barriers from the low level of economic development

Both making and enforcing laws often subject to the economic level of one society. Under the existing circumstances, the main task for China is to develop its economy. So many people, including law makers and enforcement personnel's, lack awareness of environmental protection. Even though they are not in favor of polluting and damaging the environment, they do not consider crimes the behavior of seriously polluting and damaging the environment.

## 5.2 Proposed solutions to overcome barriers

### 5.2.1 To perfect the legislation to punish environmental crimes

The legislature body should consider revising the existing Criminal Law or formulating a separate regulation for punishing environmental crimes in which the environmental crimes and the penalties against them should be specified and clarified so that the judicial personnel's can easily deal with the related cases.

In the content of legislation, the following issues should be solved:

To specify the range of environmental crimes. I think all the behavior of violating the environmental laws and polluting or damaging the environments should be given certain penalties depending on the consequences of the behavior. The criminal should include individuals, legal persons, and groups. The environmental crimes should be divided into intentional environmental crimes and negligent crimes if we look at the subjective side of crimes. And if we look at the objective side of crimes, the punishments should be given to not only the criminals whose behavior has produced certain dangerous consequences but also those who have violated the laws but not brought about serious consequences and those whose behavior has the potential to bring about damages to the environment and the hazards to human health. The environmental crimes should be specified as the crimes of air pollution, ocean and sea pollution, pollution of internal water body, soil pollution, land damage, forest destruction, grassland damage, killing endangered species and animals and collecting endangered rare plants and others.

To formulate effective methods of punishment. First, a system of double punishment should be established. The environmental criminals, in most cases, are the groups or legal persons. To punish the environmental crimes effectively, both the persons responsible and the legal entity responsible should be punished. The person directly responsible for the case may be the representative of the legal entity as well as the executor of the illegal behavior. Secondly, a penalty of property confiscation and compensation for losses should be established to punish environmental crimes. The penalties of paying fines and property confiscation should be fully given to check the motive of polluters to a maximum extent to pursue the economic interest by sacrificing environmental resources. Since the penalties, except fines, cannot be applied to the legal persons, this proposed penalty of property confiscation or compensation for losses can be applied to the legal persons in the case that the criminal is the legal person. Thirdly, a penalty of stopping operation or production should be established. When the penalty of property confiscation or compensation for losses cannot prevent the environmental crimes, the penalty of stopping production or operation shall be adopted to check the continual of the criminal behavior because some behavior of polluting the environment, such as discharging pollutants into water bodies, is often frequent and constant. If the production or operation is not stopped, the behavior of polluting the environment will not be stopped. Under such circumstance, only through stopping production or operation can the punishment be effective.

### 5.2.2 To set up a precedent rule for environmental criminal penalty

Legal precedents are typical examples of successfully employing the laws which have been confirmed by the legal authorities as reference for judging the future cases. At present, China's environmental legislation is still developing and only principled regulations can be made on many problems. In addition, many judicial personnel's lack the experience of punishing environmental crimes and perfecting environmental legislation will play an active role in effectively punishing environmental crimes. First, setting up a precedent can help interpret and specify some abstract provisions and remove the ambiguities in the process of law enforcement. Next, precedents can provide the judicial personnel with examples of measuring the penalty against

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the behavior of polluting and damaging the environment. Thirdly, setting up a precedent rule can meet the changing situation of environmental crimes and avoid the necessity to amend or revise the environmental laws constantly.

#### 5.2.3 To strengthen the training of judicial personnel

Since most of judicial personnel's in China lack the experience in punishing environmental crimes, it is necessary to provide them with training's in this field. The training can cover: a) a systematic knowledge of the laws punishing the environmental crimes; b) knowledge of characteristics of environmental crimes; c) techniques to investigate environmental crimes; and d) analysis and discussion of precedents of punishing environmental crimes. The training of this kind is expected to upgrade the quality of judicial personnel's and promote the development of environmental legislation and justice.



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## THE NETHERLAND'S MANUAL: INVESTIGATIONS OF COMPLEX ENVIRONMENTAL OFFENCES

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### SUMMARY

The Manual "Complex Environmental Offences," published by the Inspectorate for the Environment in 1994, is intended for those active in the area of environmental enforcement who may be involved with criminal investigations. The manual was drawn up in cooperation between the partners in the enforcement network: the Public Prosecutions Department, the police, the local authorities, and the Environmental Assistance Team.

An important reason for publishing this manual was the realization that the specialized knowledge and experience needed for the investigation of major environmental offences was quickly disappearing from these enforcement groups, for reasons including the turnover of staff and reorganizations.

The manual is also very useful when dealing with less complex environmental offences.

The English-language version of the manual has been revised; those matters which are relevant only to the situation in the Netherlands have been either omitted or rewritten.

As is usual legal practice in the Netherlands, the public prosecutor has the leading part in criminal investigations. In other countries these duties may fall either partly or completely under the responsibility of the judiciary.

### 1 PURPOSE

The purpose of this manual<sup>1</sup> is to provide support during the investigation and prosecution of complex environmental offences by:

- Serving as a guideline when setting up an organization for the investigation of an environmental offence, and during the actual execution of the criminal investigation.
- Providing an insight in the duties of the bodies which may be involved in an investigation.
- Furthering a consistent interpretation of concepts pertinent to the kind of investigation involved.

The text of the manual is built around a flow chart which describes the course of a criminal environmental investigation. Important decisions to be made during the investigation are shown in the flow chart and further discussed in the text.

A three-stage investigation is assumed:

- The informative investigation, to establish whether there are reasonable grounds to suspect that an environmental offence has been committed; and if an offence has been committed, then whether a criminal investigation is the most suitable means of dealing with the offence.
- The preliminary investigation, in which the more detailed and more extensive information needed for an effective prosecution is collected.
- The factual investigation, the stage at which it becomes known that the judiciary, the police, and the assisting authorities are conducting an investigation. The purpose of this investigation is to collect the definitive evidence for the trial by conducting an administrative investigation together with the interrogation of witnesses and suspects.

The manual also gives a number of useful suggestions and recommendations concerning enforcement matters, which are based on experience. This makes the manual of use to all involved in the investigation and prosecution of complex environmental offences.

The emphasis of the manual's contents is especially on those aspects in which criminal investigations of environmental offences differ from criminal investigations according to the general provisions of the Dutch Criminal Code. Examples are:

- The timely recognition of pitfalls in environmental legislation and environmental protection.
- Differences in culture which may be encountered during cooperation between the authorities and the police.
- The powers provided by legislation other than just legislation concerning criminal proceedings as proscribed in the Dutch Code of Criminal Procedure (examples are the Economic Offences Act and the Environmental Management Act).
- Making efficient use of the enforcement network.
- The continual balancing of the interests of criminal investigations (investigation of the offender) against the interests of the environment (investigation of the causes of the act committed, and its consequences for the environment).

## **2 THE INSPECTORATE FOR THE ENVIRONMENT IN THE FIGHT AGAINST CRIME**

The Inspectorate for the Environment has been involved in the investigation of environmental offences since the formation of the Environmental Assistance Team in 1985.

The Environmental Assistance Team was established with the intention of intensifying efforts to combat environmental crime. This was seen to be necessary in the aftermath of a number of environmental scandals in the Netherlands in the early 1980s, which also revealed significant deficiencies in both the inspection and the investigation of matters concerning environmental legislation. As a result the Minister of Housing, Spatial Planning and the Environment and the Minister of Justice decided to form a national group of experts specialized in criminal behaviour.

In the beginning the Environmental Assistance Team had a pioneering role. The Team concentrated on the furthering of investigations carried out by the police, who were confronted with the new field of environmental offences. In recent years various agencies have become closely involved in the enforcement of environmental legislation; this involvement is in the form of inspection and investigation. There has been a substantial build-up of resources among the police and the judiciary, and special investigating officers have been attached to a number of administrative bodies for the specific purpose of the investigation of environmental offences. Experience has also shown that, to obtain the best possible information concerning the enforcement of environmental legislation, close cooperation is required with inspection agencies and officers in the investigation of environmental offences.

The Environmental Assistance Team is comprised of officers from the various divisions of the Inspectorate for the Environment. These officers have complete powers of inspection and complete powers of search throughout the country, and have followed special training to enable them to act as investigating officers. They have also undergone a security screening.

The duty of the Environmental Assistance Team is to provide practical assistance during the conduction of criminal investigations, and to participate in them. This is provided to the police, the Public Prosecutions Department, and other investigating agencies. Assistance is given by supplying the necessary specialized knowledge and technical aids, and the provision of laboratory and research facilities. The Environmental Assistance Team can also carry out inspections and inquiries in companies or particular categories of companies, in order to collect information for administrative and/or judicial purposes. The Environmental Assistance Team can provide specialized knowledge in the following areas: process technology, chemistry, administrative and legal affairs, environmental protection, criminal investigation and business administration.<sup>2</sup>

#### ENDNOTE AND REFERENCE

1. Ministry of Housing, Spatial Planning and the Environment, Publication document number 1993/79.
2. The investigative activities of the Inspectorate for the Environment. Planned developments 1993 - 1998.



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## SPECIAL TOPIC WORKSHOP J

### Enforcement of Economic Instruments

Papers and Workshop J discussions built on papers published in the Proceedings of the Third International Conference on this topic.

- Economic instruments and how requirements or incentives are defined (e.g., emission taxes, marketable permits).
- Particular challenges or problems posed by designing effective compliance strategies and enforcement responses.
- Institutional requirements and design requirements for the program that would help in enforcement.
- Particular training or inspection approaches that are most useful in trying to detect violations and compliance problems.

How those challenges might be overcome.

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1. Summary of Enforcement of Economic Instruments Workshop, <i>Facilitators: J. van den Heuvel, J. Rothman, J. Wise, Rapporteur: D. Novak</i> .....	597
2. Enforcement of Pollutant Discharge Fee in China, <i>H. Baolin</i> .....	601

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See related papers from other International Workshop and Conference Proceedings:

1. The Enforcement of Environmental Charges in The Netherlands, *J.A. Peters, W.F.G. Alblas*, Volume I, Oaxaca, México
2. Enforcement of Economic Instruments in the United States, *J.B. Rasnic*, Volume I, Oaxaca, México
3. Summary of Workshop: Enforcement of Economic Instruments, *Facilitator: J. Peters, Rapporteur: E. Cowan*, Volume II, Oaxaca, México
4. Enforcement of Economic Instruments in Russia, *M.M. Brinchuk*, Volume II, Oaxaca, México
5. Privatization as an Opportunity to Enhance Compliance, Poland's Perspective, *S. Wajda*, Volume I, Budapest, Hungary
6. Environmental Problems in the Hungarian Privatization, *I. Mandoki*, Volume II, Budapest, Hungary



## ENFORCEMENT OF ECONOMIC INSTRUMENTS

Facilitators: Jan van den Heuvel, John Rothman, John Wise  
Rapporteur: David Novak

### GOALS

The following were issues for the workshop:

- Economic instruments and how requirements or incentives are defined (e.g., emission taxes, marketable permits).
- Particular challenges or problems posed by designing effective compliance strategies and enforcement responses.
- Institutional requirements and design requirements for the program that would help enforcement.
- Particular training or inspection approaches that are most useful in trying to detect violations and compliance problems.
- How those challenges might be overcome.

### 1 INTRODUCTION

More than 15 participants from 10 countries met in two separate sessions. The sessions included representatives from countries in all stages of economic development.

The discussion centered around four major topics of interest: the purpose and application of economic instruments; the benefits of using economic instruments as opposed to command and control approaches to compliance and enforcement; particular examples of economic instruments being used in both developing and developed countries and how successful they have been in achieving their stated purpose.

### 2 PAPERS

One paper, by Dr. Hu Baolin, was prepared for the workshops. The paper deals with enforcement of pollution discharge fees in China. Over the past decade, environmental laws and regulations have developed rapidly in China resulting in examples of the successful use of economic instruments to promote environmental compliance. A system of pollution charges backed by fines for non-compliance is currently in use in the country, and has met with initial success. The purpose of the fee is to encourage enterprises and industries to voluntarily reduce pollutant discharges in order to minimize the discharge fee. The policy is designed to allow the polluter to assume responsibility for controlling pollution in China.

### 3 DISCUSSION SUMMARY

#### 3.1 The purpose and application of economic instruments

The participants first addressed the need to have a regulatory structure in place before the use of economic instruments can be considered. The participants agreed that there was a great deal of interest in promoting the use of economic instruments in their respective countries. In some cases, however, this interest had not developed beyond economic theory, and command and control approaches to environmental compliance and enforcement were still the most widely utilized measures. The discussion centered around the benefits that can be derived from the use of economic instruments and at what level economic instruments may be incorporated.

In a highly competitive global economy there is a compelling need to:

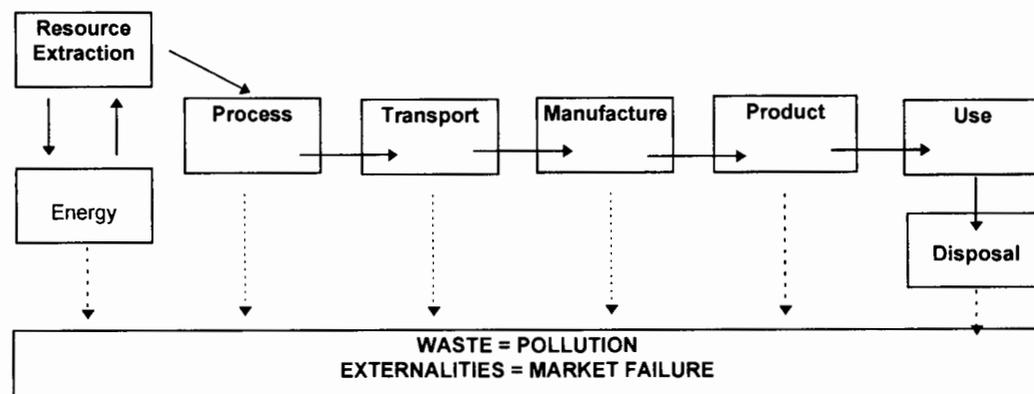
- Reduce waste.
- Increase efficiency.
- Reduce costs.
- Modify supply and change demand.
- Reduce liabilities.

While command and control approaches may achieve the environmental goal of reducing pollution, they may increase the cost of production and often require strict monitoring practices through the use of fines, penalties, and strict liability. Economic incentives can successfully be used to:

- Reduce pollution.
- Internalize externalities.
- Change behavior.

A simple linear production model was used to illustrate how and where externalities can arise during production and at what level economic instruments may be employed.

**Figure 1 Basic Linear Production Model**



Discussion included illustrations of where certain economic instruments may be most appropriate. For example, a tax or fee on waste disposal of the final product will be born by the end user. The tax or fee may have no impact on resource extraction or production practices. On the other hand, a tax or fee on raw resources at the point of extraction may alter production practices and reduce the waste generated at every step of the production model.

### 3.2 Benefits of economic instruments

A goal of the majority of participants was to begin to shift away from, or to supplement, command and control type enforcement systems with systems that incorporate market incentives for pollution control. The interest in economic instruments or market incentives stem from the potential economic benefits that can be derived from the use of such policies. While the theory behind the use of economic instruments is sound, many governments and industries are hesitant to abandon traditional command and control policies, where firm behavior is well documented and predictable, to employ untested economic policies. In some cases, the use of economic incentives may not yield clear-cut behavioral changes, and there is some uncertainty as to how firms may react to varying economic policy changes. However, the lure of potential benefits including monetary and efficiency gains that, theoretically, will result from the use of economic instruments is tempting to many governments. A list of potential benefits resulting from economic instruments are listed below.

- Economic instruments can result in cost savings.
- Economic instruments promote efficient use of resources.
- Externalities are internalized.
- Industry may adopt a more cooperative approach to pollution control.
- Economic instruments allow increased productive flexibility in dealing with pollution control.
- The burden of pollution control shifts to the private sector, away from the public sector.
- The use of economic instruments promotes technological developments, while command and control policies do not.
- Used properly, economic instruments can promote environmental compliance as well, or better than command and control approaches.

### 3.3 Examples of economic instruments

It is important to note that in many cases it is difficult to make a clear distinction between economic instruments and command and control approaches. The two approaches are often blended together. For example, fines, quotas, and pollution fees can be viewed as either an economic instrument to encourage pollution control or a command and control regulation. Furthermore, economic instruments have some underlying regulation, that often include fines or penalties. Examples of some economic instruments presented in the discussion are listed below.

- Fees or charges (to discharge, emit, or dispose).
- Taxes (on inputs, outputs, or waste).
- Market approaches (open trading, price clearing).
- Subsidies.

- Royalties.
- Emission reduction credits.
- Banking (mitigation banking, asset (savings account)).
- Cross-media trading.
- Trade policy (tariffs, quotas, PPMs).
- Deposit/refund system.
- Recognition and rewards (green labeling).

#### **4 CONCLUSIONS**

Both session precipitated some very constructive and interested discussion and concluded with examples being given of economic instruments used in specific countries. Participants described economic incentives being used in their respective countries and discussed issues surrounding the regulatory framework, the purpose of the instrument, and how effective the instrument was. The discussion was very open and did not focus on "right" or "wrong" approaches to pollution control.

It is important to note that the applicability of economic instruments may vary between countries (for a wide variety of reasons) depending on the type of pollution being controlled (air, water, waste) and on the overall objectives of the policy. While economic instruments can not completely replace command and control regulations, they can offer a cost effective and efficient approach to pollution control.

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## **ENFORCEMENT OF POLLUTANT DISCHARGE FEE IN CHINA**

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### **SUMMARY**

The environmental legislation has witnessed rapid development since the early 1970s in China. On the basis of its successful experience in the field of environmental management, China has formulated and implemented many laws and regulations relating to environmental protection. The system of pollution charges now under operation nation-wide is one of its efforts in the aspects of environmental legislation and enforcement and offers a successful example in improving environments by using economic and legal means.

### **1 CONCEPT**

The system of levying fees for pollutant discharge means: the enterprises and institutions discharging pollutants or discharging pollutants in excess of the prescribed discharge standards shall pay an amount of fees according to state laws, regulations and discharge standards for eliminating and controlling the pollution.

### **2 PURPOSE**

The system is aimed to encourage enterprises and institutions to enhance management, comprehensively use resources, prevent and control pollution and improve the environment. Combining with actual conditions in China, it is designed according to the policy principle "polluter assumes responsibility for eliminating and controlling the pollution" and also the theories concerning environmental value and environmental economy.

### **3 CHARACTERISTICS**

3.1 The pollution charges are levied compulsorily. A pollutant discharger shall pay the fee within a prescribed period; if not, it shall pay additional 1 per thousand of the amount a day as arrearage; if it fails to pay the fee for discharge of pollutants, the competent department of environmental protection administration may impose a fine and apply to the people's court for compulsory enforcement.

3.2 The payment shall not exempt a pollutant discharger from responsibility for eliminating and controlling the pollution and compensating for the damage incurred and also other liabilities provided by laws.

3.3 For those new incurred or severe pollution cases, the charging standards shall be higher than ordinary ones. This involves the newly-built enterprises since September 13, 1979 when the Environmental Protection Law (for Trial Implementation) was promulgated which discharge pollutants in excess of the prescribed standards; enterprises that dismantle installations for the prevention and control of pollution or leave them idle without authorization and thereby discharge excessive pollutants; and those enterprises and institutions which didn't complete the pollution control projects within a certain period of time. Their fees for excessive discharge shall be doubled. If an enterprise or institution has paid the fee but retains its excessive pollutant discharge, the fee levied upon it shall be raised by 5 percent annually beginning from the third year since the first imposition.

3.4 Both preferential and punitive policies are pursued. The preferential policies adopted to encourage enterprises prevent and control pollution include: the fee levied for pollutant discharge may enter the production costs, the subsidies will be allocated to those key pollutant-discharging enterprises for their pollution control, and the special funds for pollution control will be offered at low interest rate or free conditionally. The defined arrearage, the additional charges, the doubled payment and fines, however, as punitive measures, shall not enter the production costs.

3.5 The special funds shall be used for certain purposes and shall be paid. The income derived from fees for pollutant discharge shall be put into budgets and shall be used as special subsidy for controlling major pollutant sources and comprehensive contamination. The special funds supplied for pollutant source control shall be paid by the person receiving a loan.

#### **4 EFFECTS**

4.1 The system helps to coordinate economic development with environmental protection by using economic means. As the pollution pre-control is related to the economic interests of enterprises, it has played a role in balancing environmental, social and economic efficiencies.

4.2 Through the practice, relevant enterprises have enhanced their capacity and quicken their steps on pollution control. The fees levied for the discharge or excessive discharge of pollutants are used as subsidies for key pollutant source control and overall pollution control, opening up a new fund-raising channel and arousing the enthusiasm of enterprises in controlling pollutant discharges. As a result, their capacity of pollution control has been enhanced.

4.3 The practice exerts pressure upon pollutant dischargers and thereby urges them upgrade management. To seek economic interests, they have to improve management so as to reduce pollutant discharges.

4.4 The practice urges those discharging enterprises to carry on technological transformation and raise the rate of utilization of resources and materials. The only way out to reduce and eliminate discharge of pollutants for enterprises is to innovate their technologies and give up backward techniques and equipment, fully use and save on resources and energy and reduce the waste so as to raise the rate of utilization of resources and energy, promote technological progress and cut down the production cost. Only by doing so can they raise both economic and environmental efficiency.

**Figure 1. Provisions Concerning the Pollution Charges System Laws****Laws**

- 1) The Environmental Protection Law: Article 28 and Article 35, Section 3 (1989)
- 2) The Law on the Prevention and Control of Atmospheric Pollution: Article 11, Section 1 and Article 31, Section 5 (1987)
- 3) The Law on the Prevention and Control of Water Pollution: Article 15 and Article 37, Section 1 (1984)
- 4) The Law on the Prevention and Control of Environmental Pollution Caused by Solid Waste: Article 34, Article 48 and Article 59, Section 1 and Section 2 (1995)

**Administrative Regulations**

- 1) The Regulations for the Enforcement of Law on the Prevention and Control of Atmospheric Pollution: Article 25, Section 5 and Article 30 (1991)
- 2) The Regulations for the Enforcement of Law on the Prevention and Control of Water Pollution: Article 31, Section 5 and Article 36 (1989)
- 3) The Regulations on Noise Pollution Control: Article 13 and Article 37 (1989)
- 4) The Management Regulations on Environmental Protection in the Exploration and Exploitation of Marine Petroleum: Article 26 (1983)
- 5) The Management Regulations on Controlling Marine Pollution Caused by Terrigenous Pollutants: Article 7, Article 29 and Article 32 (1990)
- 6) The Provisional Methods on Levying Pollution Charges (1982)
- 7) The Provisional Methods on the Non-Gratuitous Use of Special Funds for Pollutant Source Control (1988)
- 8) The Regulations of the State Council on Strengthening Environmental Management of Village-Run, Township and Neighborhood Enterprises: Article 1, Section 3 (1984)
- 9) The Decision of the State Council on Environmental Protection Work: Article 5, Section 5 (1984)
- 10) The Temporary Provisions Concerning Environmental Management in the Opening Economic Zones: Article 9, Section 2 (1986)

**Ministerial Regulations**

- 1) Methods on Financial Management and Accounting Calculation on Collecting Fees for Over-Standard Pollutant Discharge (1984)
- 2) The Announcement on Setting An Additional Budgetary Account "Fee for Pollutant Discharge" (1982)
- 3) The Regulations on Strengthening Management of Subsidies for Environmental Protection (1990)
- 4) The Announcement on Regulations Concerning Funds Channels for Environmental Protection: Article 4 (1984)
- 5) The Methods on Radioactive Environment Management: Article 21 (1990)

4.5 The system helps pollutant dischargers raise their sense of responsibility for environmental protection and urges them take measures to protect and improve environments.

## 5 LEGAL PROVISIONS

The Environmental Protection Law stipulates in Article 28: Enterprises and institutions discharging pollutants in excess of the prescribed national or local discharge standards shall pay a fee for excessive discharge according to state provisions and shall assume responsibility for eliminating and controlling the pollution. The income derived from the fee levied for the excessive discharge of pollutants must be used for the prevention and control of pollution and shall not be appropriated for other purposes. The Law provides in Article 35: Any violator of this Law shall be warned or fined for ... failing to pay, as provided for by the state, the fee for the excessive discharge of pollutants.

The Law on the Prevention and Control of Atmospheric Pollution, the Law on the Prevention and Control of Water Pollution, the Law on the Prevention and Control of Environmental Pollution Caused by Solid Waste, and the Regulations on Noise Pollution Control all include similar provisions. In accordance with these laws, the fee-payers refer to those enterprises which discharge pollutants into the air; enterprises and individuals that emit noises into the surroundings; and the enterprises and institutions which discharge pollutants into the water. As a special case, whether enterprises discharge pollutants into the water in excess of discharge standards or not, they shall pay fees, as provided for by the state. This decision is made in consideration of the shortage of water resources and the seriousness of water pollution in China.

In order to guarantee the operation of the system levying fees for pollutant discharge, the State Council has formulated and issued the Provisional Methods on Levying Pollution Charges, the Provisional Methods on the Non-Gratuitous Use of Special Funds for Pollutant Source Control and other administrative regulations. Also, other statutes concerning environmental protection include a lot of relevant stipulations in this regard.

## 6 IMPLEMENTATION

Up to now, China has established a complete set of laws, regulations, standards, financial systems and working procedures in levying fees for discharge of pollutants. And they have played an important role in controlling pollution and improving environments and encouraging enterprises upgrade management and fully use resources and energy, thereby furthering the environmental protection cause. Statistics show that more than 300,000 enterprises and institutions now pay fees for their discharge of pollutants and that the accumulated income derived from these fees

Year	Payers (thousands)	Collection Amount	Use Amount	Use for Source Control	Use for Area Control	Control Projects Finished
1990	186	1.75	1.48	0.92	0.08	16,516
1991	207	2.01	1.52	0.94	0.07	17,706
1992	217	2.36	1.95	1.18	0.10	18,977
1993	251	2.66	2.13	1.21	0.07	17,990
1994	301	3.10	2.39	1.15	0.08	17,282
<b>Total</b>		<b>11.88</b>	<b>9.47</b>	<b>5.40</b>	<b>0.40</b>	<b>88,471</b>

has amounted to 24 billion yuan since 1979, 80 percent of which, equal to 15 percent of the total amount of funds allocated to controlling industrial pollution, were used as subsidies to controlling key pollutant sources, with the rest 20 percent used in general environmental protection projects, such as purchasing instruments for environmental monitor, strengthening environmental education and developing studies on pollution control.

Over the past 15 years, China has invested these funds into 220,000 pollution control projects, with 210,000 having been completed. All these projects have a capacity of treating wastewater 16 billion tons and waste gas 4,000 billion cubic meters a year, handling and reusing solid waste 70 million tons and controlling 19,000 noise sources. As efforts have been extended to encourage enterprises to improve management, save on and fully use resources and control pollution, the enterprises have earned economic returns nearly 9.5 billion yuan.

## **7 CHARGING METHODS**

### **7.1 Basis for levying the fee for discharge of pollutants**

The pollutant discharger shall report to and register with the local environmental protection agency about the variety, quantity and density of discharged pollutants, which, subject to check by the environmental protection agency or other monitor agency it assigned, will be the basis for levying the fee.

### **7.2 Standards for levying the fee**

The existing standards are provided for in the relevant document issued by the State Council. According to the document, some large and medium-sized cities with concentrated industrial enterprises and suffering severe pollution (subject to the approval of competent department of environmental protection administration under the State Council) may raise the charging standards in a bid to urge enterprises gradually reduce its discharge of pollutants through technological transformation. As to the pollutants excluded in the document, the provincial governments may work out local standards.

### **7.3 Increase and decrease of the fee**

If an enterprise remains to discharge pollutants in excess of discharge standards after paying the fee, from the third year after the first payment, its fee shall increase by 5 percent annually. If an enterprise has accorded with the discharge standards or reduced its discharge of pollutants through control measures, it may apply to local environmental protection agency for re-monitor; if so as proved, it may stop paying the fee or reduce the payment amount.

## **8 MANAGEMENT AND USE OF THE POLLUTION FEES**

The fees levied shall be included in budgets as a special item, the environmental protection subsidy under joint management of environmental protection agency and financial department. They shall be used for special purposes with regard to pollution control and shall not be overspent or even appropriated for other purposes. The surplus may be used in next year. The environmental protection subsidies shall be applied in controlling major pollutant sources

and comprehensively improving environments. The pollutant control program put forward by enterprise shall be examined by competent departments and the funds needed shall be raised mainly by itself. If it is really hard to raise funds, the enterprise may apply to local environmental protection agency and financial department for subsidy, but the amount of subsidy shall not exceed 80 percent of the total fees it has paid.

## 9 SPECIAL FUNDS FOR POLLUTANT SOURCE CONTROL

Problems still exist in using the funds derived from fees levied for discharge of pollutants. On the one hand, the funds used for controlling pollution are in short supply, on the other hand, a part of these funds were overstocked or even appropriated for other purposes, effecting a low utilization ratio. An important reason is that the funds were allocated to various enterprises that paid the fee and thus were used in a scattered manner and at a low efficiency. To settle the problems, in July 1988 the State Council issued the Provisional Methods on the Non-Gratuitous Use of Special Funds for Pollutant Source Control, which stipulates to set up the Special Funds for Pollutant Source Control. According to the document, the Funds shall be established and managed in an independent accounting by the environmental protection agencies at provincial, city and county levels, and they shall be allocated as loans by local banks and shall be paid back by enterprises.

The funds are raised from the fees levied upon major enterprises discharging excessive pollutants. As subsidies, they are used in focus of following projects:

- key projects for pollutant source control;
- projects for comprehensive utilization of waste gas, waste water and industrial residues;
- model projects on pollutant source control; and
- the installations for the prevention and control of pollutant sources in those enterprises which are newly merged, shift to produce new products, or are moved into new places.

The prospective borrowers are those enterprises which have paid the fee for discharge of pollutants. The enterprises shall apply for the funds in conformity with the prescribed conditions. The priority is given to the enterprises which are required to control pollution within a definite time, which cause serious pollution cases urgent to be under control, and which have raised over 60 percent of investment themselves. The Special Funds are under unified management and distribution of environmental protection agencies in coordination with financial departments. The length of maturity is less than three years and the interest rate retains a low level. Up to now, the competent departments have offered this kind of loans about 3.2 billion yuan.

The procedures have been proved effective to raise the utilization rate of funds and speed up the pollution control process.

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## 10 CONCLUSIONS

### 10.1 Impact

Generally speaking, the pollution charge system has, with resort to both legal and economic means, played a positive role in encouraging pollutant dischargers eliminate and control pollution and improve the environments. However, because the fee is allowed to enter the production cost, the pollutant dischargers do not take entire responsibilities for their action. In fact, they shift the spending on to consumers, who will suffer from the increase of price. Also, the aforesaid preferential policies play the positive but also the negative role, for they mean that the state recognizes the enterprises have the right to discharge pollutants. This, of course, contradicts with the principle of protecting environments and the original intention of encouraging them reduce pollutant discharge. Moreover, a question is also raised on how to conduct a fair distribution of the subsidies among pollution control projects. It is practical to concentrate financial and material resources on key projects in the field of the prevention and control of pollution, but all enterprises having paid the fee apply for a share of funds. Therefore, how to avoid decentralized use of the special funds while guaranteeing the fairness now challenges the competent departments.

### 10.2 Scope

The existing discharge standards have some shortcomings still and some pollutants have not been covered by the system. First, the fee levied for excessive discharge of pollutants is lower than the cost of building and operating pollution control installations, so some enterprises would rather pay the fee than control pollution or utilize those facilities. Second, some enterprises discharge over two kinds of pollutants through a blow-off pipe, but it is provided now that only the pollutant of the most excessive discharge shall be levied the fee. This is certainly unreasonable and could not reflect real situation of pollution. Third, the environmental protection departments have not made charging standards on some pollutants, the sulphur dioxide that results in acid rain, for example, is still free from being levied the fee nation-wide. Also, many tertiary industrial sectors which produce severe pollution and disturb the daily life of local residents are still exempted from pollution charges. Therefore, while readjusting the charging standards on excessive discharge of pollutants, attention should be paid to raising the fee for excessive discharge to a level higher than the spending for pollution control, levying the fee upon all kinds of pollutants discharged, and increasing the charging items relating to other pollutants. And fourth, the management of the funds is unsuited to the demand of market economy now. Specifically, the special funds for pollution control account for a small proportion and the interest rate of special loans keeps at a low level. They should also be readjusted in a timely manner.

### 10.3 Implementation

In practice, some factors still hinder the system from being fully implemented. For instance, some local enterprises intend to evade paying the fee, and some state-owned enterprises fail to strictly follow relevant provisions when they drop in business slump. The personnel on environmental supervision and law-enforcement at the basic level are understaffed, as a result, the environmental management has not yet meet the needs of environmental protection undertakings.

