The Role of National Standards Bodies and Key Stakeholder Groups in the ISO/TC 207 Environmental Management Systems Standards Development Activity

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I. INTRODUCTION AND PURPOSE

As part of its overall mission of protecting human health and the environment, the U.S. Environmental Protection Agency (EPA) is a participant in multilateral efforts to develop voluntary standards for environmental management and performance. To provide a focus for this work, the EPA, in 1993, formed the Voluntary Standards Network (VSN), a cross-Agency mechanism designed to coordinate EPA's interests and participation in the development of international voluntary standards. Since that time, the Network has taken on the additional role of acting as a vehicle to promote Agency-wide objectives within the voluntary standards development arena.

A key initiative of the Voluntary Standards Network has been participation in the efforts of the International Organization for Standardization (ISO) Technical Committee 207 (ISO/TC 207), the committee charged with developing a series of standards on environmental management and related tools known as the ISO 14000 series. To ensure the ongoing effectiveness and improvement of its participation, the EPA is interested in understanding how other governments, national standards bodies, and key stakeholder groups have participated in the development of these international standards, as well as how these standards are used in other countries.

The objectives of the EPA are to better understand:

- the role of national standards bodies and their relationship to governmental agencies;

- the participation of industry, non-governmental organizations (NGO) and others in the development of international voluntary standards;

- the process of adoption of ISO standards as official national standards or regulations; and

- the ways in which these standards will be recognized or used by other governments.

To meet these objectives, we have conducted research into how the various stakeholders have participate in the ISO process. This report is a result of that research. In it, we have looked in general at how the ISO process works and then in more detail at an example of the ISO process in action, that is, the activities of ISO/TC 207. We have collected information from and about the participation of 27 of the most active participants in this activity. The participants studied also represent a geographical balance. This information has resulted in a number of findings and conclusions that can provide a basis for EPA to better understand how to establish a leadership role in representing the federal government with respect to voluntary standards. It may also be used to establish multilateral communications among all interested stakeholders.

II. BACKGROUND ON ISO/TC 207

The ISO environmental management system standards originated in several inter-related activities. First, the Business Council for Sustainable Development, a group established to provide business input into the 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, was instrumental in promoting the concept of voluntary consensus standards as a means to improve environmental performance. Second, the preparatory meetings for the Rio Conference discussed the utility and effectiveness of environmental management standards. Third, voluntary standards and their place in the international system of trade were deliberated at the Uruguay Round of GATT. Fourth, individual companies, increasingly affected by conflicting pressures from governments, and environmental and consumer groups, were seeking standards and related conformity assessment programs as a means of establishing accepted norms.

In June, 1991, at the prodding of the Business Council for Sustainable Development, the ISO and its sister body the IEC (the International Electrotechincal Commission) jointly established an *ad hoc* group, the Strategic Advisory Group on the Environment (SAGE). This group had two tasks: 1) to provide input on the potential role of international standards into the UNCED process, and 2) to develop recommendations for the Technical Management Boards of the ISO and the IEC on whether international standards should be developed in this area.

The SAGE deliberations lasted until December 1992, at which time the Group submitted its report and recommendations to the ISO and the IEC. SAGE recommended that the ISO establish a new technical committee to develop standards in the following areas:

1. Environmental Management Systems (EMS)
2. Environmental Auditing (EA)
3. Environmental Performance Evaluation (EPE)
4. Life Cycle Analysis (LCA)
5. Environmental Labeling (EL)
6. Terms and Definitions (T&D)
7. Environmental Aspects of Product Standards (EAPS)

In January of 1993 the Technical Management Board of the ISO approved the SAGE recommendations and established a new technical committee, TC 207, to manage the development of these standards. In March of 1993, the Standards Council of Canada (SCC) was awarded the management of the TC 207 Secretariat. The Canadian Standards Association took on the task of administering the secretariat on behalf of the Council.

TC 207 established a work plan that now contains 19 items.

Exhibit 1
ISO 14000 Series

Designation	Title
ISO 14001	Environmental Management Systems - Specification With Guidance for Use
ISO 14004	Environmental Management Systems - General Guidelines on Principles, Systems and Supporting Techniques
ISO 14010	Guidelines for Environmental Auditing - General Principles of Environmental Auditing
ISO 14011	Guidelines for Environmental Auditing - Audit Procedures: Auditing of Environmental Management System
ISO 14012	Guidelines for Environmental Auditing - Qualification Criteria for Environmental Auditors
ISO 14015	Environmental Assessments of Sites and Entities
ISO 14020	Environmental Labels & Declarations - General Principles
ISO 14021	Environmental Labels & Declarations - Environmental Labeling - Self Declaration Environmental Claims - Terms and Definitions
ISO 14022	Environmental Labels & Declarations - Environmental Claims - Self Declaration Environmental Claims - Symbols
ISO 14023	Environmental Labels & Declarations - Self Declaration Environmental Claims - Testing and Verification Methodologies
ISO 14024	Environmental Labels & Declarations - Environmental Labeling Type I - Guiding Principles and Procedures
ISO 14025	Environmental Labels & Declarations - Environmental Labeling Type III - Guiding Principles and Procedures
ISO 14031	Evaluation of Environmental Performance
ISO 14040	Life Cycle Assessment - Principles and Guidelines
ISO 14041	Life Cycle Assessment - Inventory Analysis
ISO 14042	Life Cycle Assessment - Impact Assessment
ISO 14043	Life Cycle Assessment - Interpretation
ISO 14050	Terms and Definitions
ISO Guide 64	Guide for the Inclusion of Environmental Aspects in Product Standards

By the fall of 1996 the first five standards in the series (ISO 14001, 14004, 14010, 14011, and 14012), those essential to the implementation and auditing of the environmental management system, were published.

Participation in the activities of TC 207 has been significant. At the first plenary meeting of the technical committee in June 1993 in Toronto, Canada, well over 200 delegates from more than 30 countries participated. By the fifth plenary meeting, held in Kyoto, Japan in April 1997, more than 500 delegates from 70 countries participated. In addition, more than 50 subcommittee and working group meetings are held each year.

Exhibit 2 lists the countries (with member body in parentheses) who participate in ISO/TC 207 activities.

There are also 30 liaison members. These are organizations (rather than countries) that bring relevant expertise to the table. They can participate fully in all meetings and discussions but cannot vote. Exhibit 3 lists the organizations that act as liaison members to TC 207. These members usually represent the larger International industry sector associations, inter-government agencies, and International NGOs and ENGOs.

Exhibit 2
ISO/TC 207 Members

	P - Status	O- Status
	Country & Organization	**Country & Organization**
1.	Algeria, INAPI	Barbados, BNSI
2.	Argentina, IRAM	Botswana, BWA
3.	Australia, SAA	Costa Rica, INTECO
4.	Austria, ON	Croatia, DZNM
5.	Belgium, JBN	Estonia, EESTI
6.	Brazil, ABNT	Ethiopia, EAS
7.	Canada, SCC	Greece, ELOT
8.	Chile, INN	Hong Kong, HKPC
9.	China, CSBTS	Iceland, ICS
10.	Colombia, ICONTEC	Libya, LNCSM
11.	Cuba, NC	Lithuania, LST
12.	Czech Republic, COSMT	Poland, PKNMIJ
13.	Denmark, DS	Portugal, IPQ
14.	Equador, INEN	Slovakia, UNMS
15.	Egypt, EOS	Slovenia, SMIS
16.	Finland, SFS	Sri Lanka, SLSI
17.	France, AFNOR	Vietnam, TCVN
18.	Germany, DIN	Yugoslavia, SZS
19.	India, BIS	
20.	Indonesia, DSN	
21.	Ireland, NSAI	
22.	Israel, SII	
23.	Italy, UNI	
24.	Jamaica, JBS	
25.	Japan, JISC	
26.	Kenya, KEBS	
27.	Korea, KBS	
28.	Malaysia, SIRIM	
29.	Mauritius, MSB	
30.	Mexico, DGN	
31.	Mongolia, MISM	
32.	Netherlands, NNI	

Exhibit 2 (continued)
ISO/TC 207 Members

	P - Status	O- Status
	Country & Organization	**Country & Organization**
33.	New Zealand, SANZ	
34.	Norway, NAS	
35.	Philippines, BPS	
36.	Romania, IRS	
37.	Russian Federation, GOST	
38.	Singapore, SISIR	
39.	South Africa, SABS	
40.	Spain, AENOR	
41.	Sweden, SIS	
42.	Switzerland, SNV	
43.	Tanzania, TBS	
44.	Thailand, TISI	
45.	Trinidad and Tobago, TTBS	
46.	Turkey, TSE	
47.	Ukraine, DSTU	
48.	United Kingdom, BSI	
49.	Uruguay, UNIT	
50.	USA, ANSI	
51.	Venezuela, COVENIN	
52.	Zimbabwe, SAZ	

P = Participating member
O = Observer member

Note 1: This list is correct as of Feb. 21, 1997. Changes occur frequently.

Exhibit 3
Liaison Members

	Organization
1.	Asian Productivity Organization
2.	Confederation of European Paper Industries
3.	Consumers International
4.	Directorate General of European Commission
5.	Environmental Defense Fund
6.	European Apparel and Textile Association
7.	European Chemical Industry Council
8.	European Environmental Bureau
9.	European Manufacturers of Expanded Polystyrene
10.	Forest Stewardship Council
11.	Friends of the Earth International
12.	International Academy for Quality
13.	International Chamber of Commerce
14.	International Council on Metals and the Environment
15.	International Federation of Consulting Engineers
16.	International Federation of Organic Agricultural Movement
17.	International Institute for Sustainable Development
18.	International Iron and Steel Institute
19.	Industrial Minerals Association
20.	International Network for Environmental Management
21.	International Primary Aluminum Institute
22.	International Trade Centre
23.	Organization for Economic Cooperation and Development
24.	Sierra Club
25.	United Nations Conference on Trade and Development
26.	United Nations Environment Program
27.	United nations Development Program
28.	World Wide Fund for Nature
29.	World Federation of Sporting Goods Industry
30.	World Trade Organization

III. METHODOLOGY

To generate and evaluate information on role of National standards bodies and key stakeholder groups in the ISO/TC 207 environmental management systems standards development activity, we followed a methodology consisting of four phases.

1. Identify Data Requirements and Sample Base

To streamline the research process, we began by combining the information requirements of the scope of work for task 3.1 (Review the Involvement of Government Agencies of Other ISO Member Nations in Developing and Using Voluntary Standards) and task 3.3 (Review the Role of the Private Sector in Developing Voluntary Standards in other ISO Member Nations in Developing and Using Voluntary Standards). To address the latter we expanded the scope of our research on the role of the private sector to include environmental non-governmental organizations (ENGOs), and professionals such as academics and consultants. We then developed a template that listed the information that we would seek from the subject countries. This is presented in summary form below.

Exhibit 4
Research Template

Identification	
1. Country	
2. Member Body	
3. Address	
4. ISO/TC 207 Contacts	
• Standards Body Contact	
• Government Contact	

Content	
General Information	
1. Type of member body government of private sector	
• legal mandate or authority	
2. Relation of member body to environmental regulatory authority	
TC 207 Participation	
3. How participation is structured	
4. How is head of delegation chosen	
5. Is there balanced representation on national ISO committee	

Exhibit 4 (continued)
Research Template

6. Is government on the committees:	
• how are they selected	
• from what ministries	
• what is their relative level of influence	
7. Is industry on the committees:	
• how are they selected	
• what is their relative level of influence	
8. Are environmental groups on the committees:	
• how are they selected	
• what is their relative level of influence	
9. Are other specialists on the committees (scientists, academics, consultants):	
• how are they chosen	
• what is their relative level of influence	
10. Process for national adoption of ISO standards	
11. Frequency of ISO standards cited in regulations	
12. Why are they cited	
13. Likelihood of ISO 14000 being cited in regulation	
14. Types of government support for ISO 14000:	
• used in government procurement	
• subsidies for implementation/ certification	
• subsidies for training	
• regulatory or permitting relief	

To populate the database with information we selected those countries, out of the over seventy countries that have participated in the deliberations of ISO/TC 207, which have been most active and for which information was most likely to be available. Our first screen was to include only 'P' (participating) members, that is, members who agree to participate in committee and working group meetings. 'O' (observer) members receive the documents of the committees but are not obliged to participate in the committee and working group meetings. As a consequence, their influence during the development process is less than that of 'P' members.

Of the ISO/TC 207 'P' members there are several who participate only nominally. They send few, if any, delegates to subcommittee or working group meetings and often only one delegate to the annual plenary meeting. Having reviewed recent committee attendance lists and with a view to establishing regional balance we identified the following 32 participants:

Europe

1. Austria
2. Belgium
3. Czech Republic
4. Denmark
5. France
6. Germany
7. Ireland
7. Italy
8. Netherlands
9. Norway
10. Spain
11. Sweden
12. Switzerland
13. UK

South America

1. Argentina
2. Brazil
3. Chile

North and Central America and the Caribbean

1. Canada
2. Jamaica
3. Mexico
4. Trinidad & Tobago

Asia and the Pacific

1. Australia
2. China
3. Indonesia
4. Japan
5. Korea
6. Malaysia
7. New Zealand
8. Singapore
9. Thailand

Africa

1. South Africa
2. Zimbabwe

Several countries did not respond to our several requests for information. These countries were Belgium, Denmark, Mexico, Trinidad and Tobago, and France.

We therefore developed profiles of 27 countries.

The United States was not included in this sample because it is dealt with more fully in the other Task 3 reports.

2. Review of Secondary Materials

Having identified the information requirements and the sample base, we first reviewed all available secondary materials. These included any materials published by the national standards bodies themselves (brochures, newsletters, information bulletins, articles), as well as information available on web sites.

3. Primary Research

We then contacted the national standards bodies by fax and e-mail in an effort to fill in the information gaps remaining after the secondary materials had been reviewed. Unless there was an immediate and helpful response, we followed up each fax and e-mail with a telephone call. In almost every case a telephone follow-up was required. In many cases the national standards bodies were also the sole or best source of secondary materials. Secondary and primary research thus tended to be conducted simultaneously. During the phone calls, we indicated that we were doing research on behalf of the EPA. Representatives of most countries were very cooperative and willing to share information and contacts.

4. Summary and Analysis

The final step was to review the information and to prepare this summary and analysis. We put the information obtained from primary and secondary sources into a consistent format to facilitate analysis and reporting. We developed findings for each data field. We then develop a number of conclusions based on an analysis of all data. Detailed country by country results are provided in Annex A.

IV. FINDINGS

1. Type of Member Body and Mandate

There can only be one ISO member body per country. The ISO stipulates neither the organizational structure nor the source of the mandate for these member bodies. National member bodies must, however, be able to demonstrate that their delegations represent the range of national views.

Our research suggests an interesting diversity with respect to the manner in which the member bodies are constituted. There is a full range of types of organizations. We have divided them into four types, ranging from fully governmental to fully separate from government.

Exhibit 5
Member Body and Mandate

Government Agency	Arms-Length Government Agency	Private Sector With Government Mandate	Private Sector With No Government Mandate
China	Canada - Federal Crown Corporation	Argentina	Chile
Ireland	Czech Republic	Australia	Germany
Jamaica		Austria	Norway
Japan		Brazil	
Korea		Indonesia	
Malaysia		Italy	
Singapore		Netherlands	
Thailand		New Zealand	
		Spain	
		South Africa	
		Sweden	
		Switzerland	
		U.K.	
		Zimbabwe	

Regardless of whether the member body is fully governmental of private sector there is almost always government involvement in the establishment of the mandate or authority to act. Only three of the member bodies surveyed claim to receive their mandate form their member or sources other than government. Of these three, Chile, which claims to have a fully private-sector standards body, also indicates that six of its seven standards body council members are

government officials. Germany and Norway the other two countries that claim to have independent mandates do have independently structured standard bodies with independent governance structures. As members of the European Union, however, they are, to a certain extent, bound by government policy because of the relationship between their federal governments and the European standards setting bodies (CEN, CENELEC), which receive their direction from the European Parliament. There is always significant government involvement in a national standards body.

The government agencies receive their mandate directly from the government. Their governance is also controlled by government. In many cases, however, there will be advisory councils or the like made up of experts who represent different interested parties. This is the case, for example, in Jamaica, Japan and Malaysia.

The member bodies in the two middle columns have government mandates but independent governance, through a board or council.

A few member bodies, such as the Standards Council of Canada, do not in fact develop standards but simply act as central standards accrediting organizations. The actual standards development is carried out by private sector, standards development organizations. The standards developed by these organizations are then submitted to the national body for accreditation as national standards. This is also the situation is the US where ASNI, the ISO member body, does not develop standards itself, but accredits standards developed by other voluntary standards developers such as ASTM, ASQC or NSF as American National Standards (ANS).

In most countries this is not the case. In Germany, in the United Kingdom, in Spain the member bodies - the Deutsches Institut fur Normung (DIN), the British Standards Institute (BSI), the Asociacion Espanola de Normalizacion y Certifacion (AENOR) - are more typical. They both manage the development of standards and designate those standards as national standards.

2. Relation to Environmental Regulatory Authority

Although in most countries there is a clear connection to both the regulatory and the non-regulatory elements of government, the connection to the regulatory element is most often indirect.

Exhibit 6
Relation to Environmental Regulatory Authority

Direct	Indirect - through participation on governance bodies or on development committees	None
China	Argentina	
Korea	Australia	
Singapore	Austria	
Thailand	Brazil	
	Canada	
	Chile	
	Czech Republic	
	Germany	
	Indonesia	
	Ireland	
	Italy	
	Jamaica	
	Japan	
	Malaysia	
	Netherlands	
	Norway	
	New Zealand	
	South Africa	
	Spain	
	Sweden	
	Switzerland	
	U.K.	
	Zimbabwe	

There is always some relation to the government. Where there is a direct link to a government agency, it is essentially an organizational link, as in the case of Ireland, where the national standards body is a government department but operates with considerable autonomy of governance. It is not a necessary result of this indirect link between government and standards bodies that all standards become regulation. Nonetheless, this arrangement has the opportunity to promote a better understanding among regulators of the role of voluntary standards. In addition, in most cases the direct link from the standards body to government is through an industry or

commerce ministry and not an environment ministry. Those standards bodies we have listed as having a direct link to government are those that are most open to influence by government.

In most cases, the indirect link is achieved by having members of the environmental regulatory body sit on the governing council of a standards body and on standards development committees. In many cases the indirect relationship is also supported through the funding of the standards development effort by the environment ministry.

In some instances, such as for example Jamaica, the Minister in charge of a regulated area must be kept informed of all voluntary standards development activity in his or her area of responsibility, even where there is no direct link between the regulatory body and the national standards body. In most cases, the regulatory branch will review a standard to determine whether it is appropriate for citing in a regulation.

At the National level it is often possible for a regulatory branch to commission a voluntary standards development organization to develop a standard required by legislation. However, a single country cannot commission the ISO to develop a standard for regulation. There is a formalized process for having a new work item approved by the ISO. This process involves the review and consideration of a formally submitted new work item proposal by other members bodies. No new work item can go forward without the agreement of at least four member bodies. So while a country may submit a new work item proposal to the ISO with the intent to cite the resulting standard in legislation, it may not commission the ISO directly to develop a given standard. However, they can submit a proposal to develop an international standard.

Also, ISO standards are voluntary, and ISO does not enforce their implementation. Some ISO standards - mainly those concerned with health, safety or the environment - have been adopted in some countries as part of their regulatory framework, or are cited in and provide the technical basis for legislation. However, such adoptions are sovereign decisions by the regulatory authorities or governments of the countries concerned. ISO itself does not regulate or legislate.

3. How Participation is Structured

There are three levels of ISO committee:

- the technical committee (TC),
- the subcommittee (SC),
- the working group (WG).

At the TC and SC levels decisions are made on matters of policy and strategy concerning, respectively, a standards series as a whole and a specific subject area. The working group level is where the documents actually are researched and drafted.

With few exceptions, the national committees or groups established to manage participation in a specific ISO standard or set of standards mirror the committee structure of the international

committee. These national committees or groups are most often administered by the national standards body or a standards developing organization designated by the national standards body. In ISO/TC 207 the most active countries have committees that correspond to all three levels of ISO committee (TC, SC, WG). Less active countries will mirror only the top or the top two levels, or will selectively establish mirror committees depending on their interests. Not all countries choose to be active in all committees and working groups. Accordingly, although the national committee or group structure tends to mirror the ISO structure, it is not always the case that there is a national committee or working group for every ISO committee or working group. Also, the greater the interest and involvement in a national committee, the more likely it will be that a country will participate at the working group level. The countries that participate most actively will obviously have the most influence.

Some countries however, do not have national committees or groups. Chile is a good example of this end of the spectrum. They have a series of already established national sector committees from which they select delegates to attend the ISO/TC 207 meetings.

In many cases, the national committees or groups that support international work serve double duty and act as the national committee or group to support national work. Thus, they participate in the international meetings and provide the conduit, if not the mechanism, for adopting the International standards as national standards.

The chart below provides an indication of the relative level of influence of national delegations participating in ISO standards setting activities.

Exhibit 7
Participation

Participate in all or close to all of the committees and working groups	Participate in 75% or more of the committees and working groups	Participate in 50% or more of the committees and working groups	Participate in less the 50% of the committees and working groups
Australia	Austria	Argentina	China
Canada	Brazil	Chile	Czech Republic
Germany	Indonesia	Italy	Zimbabwe
Japan	Ireland	Jamaica	
Korea	Malaysia	Singapore	
Netherlands	South Africa	Thailand	
Norway	Spain		
New Zealand	Switzerland		
Sweden			
U.K.			
USA			

Note 1: Participation means attending international meetings and actively contributing to document development. Countries with apparently low participation rates may still have very active national committees.

Note 2: The close to forty countries who are either P or O members who are not part of the sample base for this study all participate in less the 50% of the committees and working groups. In the case of well over twenty countries, participation is limited to the annual plenary meeting.

4. Head of Delegation

The way in which the head of the ISO/TC 207 delegation is chosen by varies considerably along a spectrum from appointment to election. There is a high correlation between the members with a high level of involvement and sophisticated national committee or group structures, and the members that select or elect their own head of delegation.

Exhibit 8
Process for Selection

Appointed	Selected	Elected
Argentina	Australia	Austria
Chile	Brazil	Germany
Czech Republic	Canada	Italy
Indonesia	Singapore	Japan
Ireland		Korea
Jamaica		Indonesia
South Africa		Netherlands
Spain		Norway
U.K.		New Zealand
		Sweden
		Switzerland
		Thailand
		Zimbabwe

Note: Appointed means the national member body identifies and appoints the head of delegation, often based on advice from the members. Selected means the member body plays a role by nominating or identifying the head of delegation who is then endorsed or ratified by the members. Elected means that the members initiate the process by making nominations and make the selection through an elective process.

There is also a high percentage of heads of delegation who come from the standards bodies. themselves. Most often, the reason for a standards body representative taking on the role of head of delegation is so that a balanced national view can be presented at plenary meetings. The standards body representative is usually not a stakeholder *per se*. Rather he or she facilitates the development of positions among stakeholders and administers the process. Among the countries that are less active participants in the process, the likelihood of the head of delegation being a representative of a standards body increases.

It is infrequent, yet not uncommon, for a government representative to be chosen head of delegation. This has happened, for example, in the United Kingdom. The one noticeable absence in our review, is a head of delegation from a non-governmental organization.

Exhibit 9
Source of Heads of Delegation

Country	Head of Delegation
Argentina	standards body
Australia	standards body
Austria	industry
Belgium	standards body
Brazil	standards body
Canada	practitioner (consultant)
Chile	standards body
China	government
Czech Republic	standards body
Germany	standards body
Indonesia	Standards body
Ireland	standards body
Italy	industry
Jamaica	standards body
Japan	practitioner (academic)
Korea	standards body
Malaysia	standards body
Netherlands	standards body
New Zealand	industry
Norway	industry
Singapore	standards body
South Africa	standards body
Spain	standards body
Sweden	government
Switzerland	industry
Thailand	government
UK	government
USA	standards body/other
Zimbabwe	standards body

5. National Committee Balance

ISO requirements for participation are stated in *ISO Directives, Part 1, Procedures for the Technical Work*, 1995. In clause 1.7.1 it states:

> National bodies have the responsibility to organize their national input in an efficient and timely manner taking into account all relevant interests at their national level.

The directives do not define how all relevant interests are to be accounted for; nonetheless, many national standards bodies have rules for balance that they apply to meet this requirement. The first step is usually to categorize the interested parties. The second step is to establish some sort of rule for balance. Typically, a standards committee is composed of four or five categories of members. In the environmental management systems area these are typically the following:

- government
- industry
- practitioners or users (professionals, academics, consultants)
- non-governmental organizations (environmental groups, consumer groups)

All members are volunteers. To obtain balanced membership, the national member body will usually publicize the activity and solicit volunteer participation. In practice, the member pool is usually populated in three ways:

1. The member body goes to representative government departments or ministries, and to representative industry, business, professional, environmental, and consumer associations and asks them to identify and nominate suitable members.

2. Existing committee members or member body staff identify and nominate members as a result of personal contacts and sector knowledge.

3. Interested individuals hear of the activity and put themselves forward.

Accounting for all interests is accomplished in one of two ways:

1. by balancing the national committees, or
2. by using a process of open public canvassing.

In some countries, both processes are used.

Balancing national committees is usually achieved by defining how many people from any given category may sit on the committee. There are usually no hard and fast rules about numbers. The major concern is that no one group can dominate. In Canada, for example, the rule of thumb is that the number of members in the category with the largest number of members (usually

industry) cannot be larger than the number of members in the sum of the smallest two categories (usually government and NGOs). Thus, no one group will have more than 50% of the vote.

Where there is no similar rule of thumb for committee or group balance, the requirement for taking into account all relevant interests is often dealt with through a process of public canvassing. In other words, at various stages in the development process the draft standard is made available to the public for review and comment. The effectiveness of this process is dependent upon the public coming forward. Regardless of whether or not there was actual participation by representatives of each category, this canvassing process allows the member body to claim that the requirement has been satisfied (because the document was made available).

While most countries participating in ISO/TC 207 declare that they have balance in principal, in fact, very few seem able to demonstrate that they have achieved balance (see the tables attached and the discussion in sections 6 - 9 below).

6. Government Participation

Government representatives in the activities of ISO/TC 207 come from a wide variety of Ministries and Departments. The largest numbers are provided by environment and industry or commerce departments. The list below represents the general categories identified in the study.

Environment

Natural Resources and Sustainable Development
Environmental Protection Department
Ministry of Environment
Lands and Water Resources

Industry

Mines
Energy
Industry, Science and Tourism
Science and Technology
Industry and Trade
Agriculture and Fisheries

Trade and Commerce

Commonwealth Department
Foreign Affairs
International Development
Domestic Trade and Consumer Affairs

Infrastructure

Public Works
Housing
Rural and Urban Development
Health and Welfare

General or Interagency

Office of the President
Inter -Departmental Liaison
Interagency Environmental Standards Group

The government participates in standards development activities in some capacity in all countries. There are, however, differences in level of influence. Where there is substantial government influence, it arises not because of the numbers of government people involved but rather because of the nature of the relationship between government and standards setting activities.

Exhibit 10
Level of Influence - Government

High Influence	Equal Voice	Low Profile
Chile	Australia	Argentina
China	Austria	Norway
Jamaica	Brazil	South Africa
Japan	Canada	
Malaysia	Germany	
Netherlands	Indonesia	
Singapore	Ireland	
Spain	Italy	
	Korea	
	New Zealand	
	Sweden	
	Switzerland	
	Thailand	
	U.K.	
	Zimbabwe	

The nature of the role played by government generally appears equal to that played by any other interest group. Government representatives take leadership roles within the national committee system, they vote, and they advocate positions based on the nature and source of their participation.

7. Industry Participation

Many national standards bodies and standards developing organizations work through industry sector associations, federations of industry, and chambers of commerce. These are the bodies that have traditionally brought industry sector experts together to establish and work toward common objectives. Thus, industry representation often has a cohesiveness lacking in other categories of participants.

The dominant industry sectors involved in ISO/TC 207 include the following:

chemicals	metal fabrication
plastics	electronics
timber	information technology
forestry	manufacturing
oil and gas	heavy transport
utilities	automotive
mining	packaged goods

These sectors are those that are most international in scope and that are interested in standardization as it affects their international trade situations. They are also heavily resource-based and manufacturing-oriented. In other words, the sectors that have decided that it is worth the investment to participate voluntarily are those traditionally most affected by environmental regulations and those who might expect to benefit from voluntary standardization.

These sectors are also those in which individual facilities are most often large-scale enterprises. Small-scale enterprises are underrepresented. Although some countries claim that small and medium sized enterprises (SMEs) are represented indirectly through industry associations, it is also the case that indirect representation is never as effective as direct representation.

Most countries indicate that in principal, the level of industry influence is equal to that of other stakeholders. However, this is often qualified by saying that the fact that they have greater numbers often increases their influence. In Brazil, for example, 60% of the committee members are from industry, yet they state that all interested parties have an equal voice. As the table below indicates, industry often has a high level of influence and at the very least an equal voice. It is apparent that industry feels comfortable in the international standards setting forum and takes advantage of its strong position.

Representatives of several countries, such as Germany and Japan, did not comment on the relative influence of the various interest groups.

Exhibit 11
Level of Influence - Industry

High Influence	Equal Voice	Low Profile
Argentina	Australia	
Chile	Austria	
Japan	Brazil	
Malaysia	Canada	
Netherlands	Germany	
Norway	Indonesia	
South Africa	Italy	
Singapore	Jamaica	
Spain	Korea	
Sweden	New Zealand	
	Switzerland	
	Thailand	
	U.K.	
	Zimbabwe	

8. NGO Participation

National member bodies do not have a good record of involving non-governmental organizations - most specifically, environmental and consumer groups - on their national ISO/TC 207 committees or groups. As the chart below shows, only about half have any representation at all. Of those that do, no one was willing to claim that the influence was high. Several of those who claimed that the NGO's have an equal voice have made this claim in principle rather that demonstrating that it is practiced by providing names and numbers of participants.

Several reasons are offered:

- it is a volunteer activity and NGOs lack funds to participate,
- they have been invited and are welcome but have declined to participate, or
- they can participate in principle but - for whatever reason - they are not active at present.

The respondent for Korea claimed that there are no known environmental groups in Korea. The respondent for Singapore said something similar and defended it by saying there are only 3 million people in Singapore.

It appears that while industry is familiar with and comfortable with this forum, NGOs are either not familiar or not comfortable with it. For some NGOs the issue has to do with process. They

are reluctant to participate in a forum in which they feel the process does not provide them with a full voice. In the case of ISO this is as much perception as fact. It has, however, had an effect on participation levels. For other NGOs it has to do with a fear of being co-opted. To participate means to add the weight of your voice and your constituency. There is the fear that their name might be attached to something with which they would not feel comfortable. This argument is often seen to be disingenuous, because if you do not participate you have no opportunity to influence the outcome in a way that would be acceptable.

Exhibit 12
Level of Influence - NGOs

High Influence	Equal Voice	Low Profile	Little or No Participation
	Argentina	Jamaica	Brazil
	Australia	Netherlands	Austria
	Canada	Norway	Chile
	Indonesia	Spain	Germany
	Ireland		Italy
	New Zealand		Japan
	Thailand		Korea
	U.K.		Malaysia
	Zimbabwe		South Africa
			Singapore
			Sweden
			Switzerland

Clearly, an international forum such as the ISO must provide the necessary incentive and comfort level for the affected parties to participate. While the national member bodies have not been too successful in including NGOs in their national committees or groups, there has nonetheless been a level of highly visible participation by the NGO community. For the most part, they have chosen to participate as Liaison organizations. As Liaison organizations they can participate in any committee or working group. They do not, however, have a vote. Strategically, this can be an acceptable position. From this position an NGO can state that it participated and tried to influence the outcome but that it did not have a vote and so cannot be held accountable. While this allows for a certain level of participation by NGOs, it does not achieve the desired end, which is participation with accountability.

The NGOs who participate in ISO/TC 207 as Liaison Members include:

Consumers International
Environmental Defense Fund
European Environmental Bureau
Forest Stewardship Council
Friends of the Earth
International Federation of Organic Agriculture Movement
International Academy for Quality
International Institute for Sustainable Development
International Network for Environmental Management
Sierra Club
World Wide Fund for Nature

9. Other Participation

There is also significant participation in ISO/TC 207 from other participants, mostly consultants and academics. The participation from consultants comes mostly from the more developed and industrialized countries. From the economies in transition and the developing countries there are more likely to be academic participants than consultants.

There are few countries where there is no participation from this group. The group has less influence than industry or government but more than non-governmental organizations. In addition, most often scientists, academics, and consultants participate on committees to contribute a specific expertise. They do not usually have a position to advocate in the same way that industry, government, or the environmental groups do. If they advocate anything, it tends to be sound science and a systematic approach, as well as the need for international standards in the first instance.

Exhibit 13
Level of Influence - Consultants and Academics

High Influence	Equal Voice	Low Profile
Netherlands (for LCA)	Australia	Argentina
	Austria	Chile
	Brazil	Italy
	Canada	Norway
	Germany	South Africa
	Indonesia	Spain
	Ireland	Switzerland
	Jamaica	
	Japan	
	Korea	
	Malaysia	
	Netherlands	
	New Zealand	
	Singapore	
	Sweden	
	Thailand	
	U.K.	
	Zimbabwe	

10. Process for National Adoption of ISO Standards

In accordance with WTO agreements, it is the policy of most countries to adopt international standards wherever possible. There is a definite trend toward increased adoption of international standards. The opposite side of this coin is that fewer national standards are being developed. Sweden, for example, claims that almost no national standards are developed any more. The most common reasons cited for this trend are increased international standards development efficiency, the facilitation of trade (because there are fewer national standards to act as trade barriers), and the decreased duplication of standards.

The process for the national adoption of international standards is, in most cases, similar to the process for the development of national standards. The process begins by recognizing or accepting a need. Standards bodies themselves do not generally initiate standards development projects. They respond to requests from stakeholders. An international standard must be proposed to and approved by the members. Where a new international standard has been approved as a work item by a committee, a national committee or group, if it agrees, would

participate in the development of the standard. If it did not agree it can choose to opt out by not participating in the development process.

Once the standard has been developed each member body is faced with the decision of adopting it as a national standard. The decision is made using one of two types of process: an administrative process where a relevant person with authority approves the adoption of the standard, a more or less paperwork procedure; or a consensus-based process, where discussion on adoption of the standard goes through a national committee procedure. The administrative process relies on the consensus achieved during the international standards development process. Chile, for example, uses a process that is purely administrative. The consensus process is used by countries who must, for legal or other reasons, treat the adoption of an international standard as they would the development of a national standard. Even though consensus has been achieved international, a new consensus must be achieved nationally. When the consensus process is used there is often the opportunity to make changes, that is, to adopt an international standard with national amendments. This opportunity does not exist when the administrative process is used.

Members of the European Union use a hybrid of the consensus and administrative processes. This is because of the existence of the regional standards bodies CEN and CENELEC. The European regional standards bodies use a balloting process for approval similar to the one used by the ISO. However, once a standard has been accepted by CEN or CENELEC the members of the EU must, by law, adopt it as a national standard. This is accomplished as an administrative procedure. The relationship between CEN and CENELEC and the ISO is governed by the Vienna Agreement. This agreement establishes conditions intended to avoid undue duplication of effort and provides for a parallel balloting process. Thus, an ISO standard that is simultaneously approved through parallel ballot by CEN would be adopted by the member countries of the EU through an administrative process. However, if a member country of the EU wishes to adopt an ISO standard that has not been adopted by CEN or CENELEC, it will do so using the consensus process for national standards development.

There is often a high level of similarity in national consensus processes. This is because of the standards code of the WTO Technical Barriers to Trade Agreement (TBT) which describes how an acceptable standards development program should operate. This code has been especially useful to developing countries. Developed countries have tended to continue to use their existing systems and to fine-tune them where necessary to meet the spirit of the TBT.

Typically, the national consensus process involves a minimum of three steps.

1. develop agreement among the committee members,
2. circulate the document for public review, and
3. validate the process.

Committees of stakeholders develop standards. Very often, the national committee or group is the same committee or group that supports the international work. However, this is not always the case. In Canada, for example, there are Canadian Advisory Committees (CAC) responsible

for international work: National technical committees then adopt international standards as national standards. In reality, the members of these two committees are often, but not always, the same. In many cases, the international members form the nucleus and other, national, members are added.

National agreement or consensus among committee members is often achieved by ballot. Ballots must show substantial agreement. In Australia 67% of the committee and 80% of those voting must support adoption. In Canada all negative ballots must be resolved before the standard can be approved. The U.K. defines agreement as the absence of sustained opposition. Some countries do not ballot. Germany, for example, relies on the ability of committee members to reach agreement without the need for a vote.

The public review process makes a standard available to anyone with an interest. They may request a copy and then submit comments. These reviewers do not have a vote. Their comments must, in most cases, be reviewed by and resolved to the satisfaction of the committee or group. Reviewers can usually request an accounting of the resolution.

The validation process is a quality assurance mechanism in which a higher level steering committee or standards policy board reviews the process used for adoption to ensure that all the rules and procedures were followed. If so, then the standard is recommended for adoption as a national standard. Some countries add a final step to this validation process. Jamaica adds the step of going to the Minister in the appropriate area of responsibility to gain his or her concurrence. Japan also involves the relevant minister at this point.

Once an international standard is adopted it is confirmed by the national standards council, or equivalent body, and receives a national designation number. This is usually accomplished by adding a national prefix to the international designation. Hence ISO 14001 can have a different designation in every country where it is used.

Organizations based in countries who are not members of the ISO or in ISO member countries who have decided not to adopt a given ISO standard may still use the standard and may acquire it directly from the ISO in Geneva.

11. Likelihood of Citing in Regulation

Similar to the trend of increased adoption of international standards, there is an increased trend to adopt international standards in regulation, in the place of national standards. Thus, countries will cite international standards when there is a need and a national standard does not exist. Few countries appear to have clear public policy in this area or adequate sources of information on the citing of voluntarily developed standards in legislation and regulation. Canada, the U.K., and Australia are exceptions to this general rule.

When it comes to the ISO 14000 series, there is universal agreement that it is unlikely to be cited in regulation. However, this does not mean that regulators will not respond to the series in some

way. There are a number of options for the recognition of voluntary standards that might be classified as follows:

- cited in regulations,
- covered by an official government position or promotional policy,
- recognized by regulators - but not incorporated into regulations, and
- no action to adopt or encourage use of the standard.

Several countries, such as Argentina and Jamaica, have developed official positions on ISO 14000 and are actively promoting it. Many other countries are considering developing such a policy but have not yet done so.

To have ISO 14001 recognized by regulators but not cited in regulation is an option that is proving attractive to many countries. Essentially what this means is that conformance to ISO 14001 will be recognized as providing assurances about compliance with regulatory requirements and environmental performance but the standard itself is not required by regulation. Examples of this option will be discussed in more detail in the next section that deals with types of government support. In Europe ISO 14001 is already recognized but not required by the EMAS regulation because ISO 14001 can be used in partial fulfillment of EMAS under article 12.

12. Types of Government Support for Voluntary Standards

We looked at four possible types of government support for voluntary standards.

1. use in government procurement
2. subsidies for implementation or certification
3. subsidies for training
4. regulatory or permitting relief

In addition to these four, we also reviewed government support for participation in the standards development process. Governments almost universally provide this type of support.

Countries have not yet determined how they will use the ISO 14000 series in procurement. This is largely because the eco-labeling standards have not yet been published and they still have time to develop policies. No government has formally decided to give preference to companies registered to ISO 14001. This is partially because of timing. Few companies have yet been registered. The issue is therefore not imminent. However it may also have something to do with GATT rules about the use of technical regulations as non-tariff barriers. If a government makes ISO 14001 a procurement requirements is it *de facto* establishing ISO 14001 as a technical requirement and therefore a potential NTB? While this interpretation is unlikely since a procurement requirement does not restrict access to a geographical market, only to a government market and that it is therefore a contractual and not an inter-governmental issue, many governments are still cautious of making ISO 14001 a binding procurement requirement. It is

more likely to be identified in procurement specifications as an incentive, or made a condition after the point of sale rather than before.

Unofficially, governments who have participated in the standards development process are monitoring the type and number of organizations that are being certified. In Europe, ISO 14001 is supported in procurement practices because of the requirements of the EMAS regulation.

Many countries are providing subsidies for implementation support. These are usually of one or more of three types;

1. providing funds to sector associations to provide programs for their members,
2. sponsoring EMS implementation pilot programs, or
3. grant programs to support individual companies.

At least the following countries are providing implementation subsidies:

Argentina	Indonesia	Singapore
Austria	Ireland	Spain
Brazil	Malaysia	Sweden
Canada	Norway	Thailand
China	New Zealand	U.K.

A few countries provide some training subsidies or programs. More typically they encourage the private sector to develop ISO 14000 related seminars and workshops. Also, many standards bodies develop and deliver training programs as a source of revenue to support standards development activity.

At least the following governments provide some sort of training support:

Australia	Indonesia	Netherlands
Brazil	Ireland	New Zealand
Canada	Japan	

Although many countries are studying and considering some sort of regulatory relief, few have established programs. When we speak of regulatory relief, we refer to an easing of the administrative burden of permitting and enforcement activities. This means such things as less paperwork, consolidated permits or approvals rather than a number small ones, fewer inspections and visits, and streamlined reporting procedures. Regulatory relief does not refer to a release from the requirement to meet regulatory performance standards.

Many countries are looking to a two track or two tier system. One track would offer various types of administrative relief for organizations that have implemented and been registered to ISO 14001, and another, more traditional command and control track would be available for companies who choose not to adopt the voluntary environmental management systems approach.

We have listed a few examples below of efforts to recognize ISO 14001.

Australia

In Victoria, NSW, accredited licenses were created by the EPA. If a company meets the following three criteria then it may qualify for an accredited license that will allow for some regulatory relief, in the form of a company having to apply for fewer permits.

- EMS in place
- Auditing program
- Public participation

Government will monitor companies to ensure that their targets are achieved. If they are not, the EPA may take the accredited license away and re-apply the normal permitting system to the facility.

Jamaica

In Jamaica, the government will perform less National Resource Conservation Act (NRCA) monitoring for companies that have implemented ISO 14001. Industry will still have to apply for the same number of permits.

Japan

Currently, local governments are studying how to introduce the certification of ISO 14000 into their own regulations in place of the command and control system that is currently used. This is the dual track system similar to the one being discussed in the United States.

Netherlands

The Dutch government is stimulating the implementation of ISO 14001 by providing relief in licensing and enforcement.

New Zealand

New Zealand has initiated a pilot program with Tasman Forestry to determine whether an EMS prepared by a major business conforms with the Resource Management Act and can demonstrate an acceptable level of compliance with regional plans. The pilot aims to determine whether non-regulatory methods can be used to implement legislated requirements.

> **U.K.**
>
> In the U.K. the Environmental Agency is encouraged to allow permitting relief to companies that are ISO 14001 certified.

V.   CONCLUSIONS

We can draw the following conclusions from this review.

1. Most National Standards Bodies operate under government mandate.

2. Most National Standards Bodies have independent governance.

3. Most National Standards Bodies have indirect ties to regulatory bodies and are not responsible to them.

4. Most national committee structures mirror the ISO international committee structure.

5. The most active countries participate at all levels including the working group level, where standards are negotiated and drafted. Less active countries tend to participate only at the technical committee and subcommittee levels.

6. Heads of delegation are most often selected or elected by members of national standards bodies or members of national technical committees, but there are a surprising number who are appointed.

7. A significant number of heads of delegation work for standards bodies.

8. While most countries participating in ISO/TC 207 declare that they have membership balance and participation in principle, in fact very few seem able to demonstrate that they have achieved such balance and participation.

9. After industry, government seems to have the second highest level of participation and influence.

10. Government representatives most often act as stakeholders with an equal voice in deliberations.

11. The roles that most government representatives can play in the standards process are not limited.

12. Industry has the highest level of representation and influence.

13. Industry is most comfortable with the standards development process.

14. Industry is the most cohesive group (often across national delegations) because of the work of associations and the role of transnationals.

15. Small and medium sized enterprises are under-represented in standards deliberations.

16. NGOs are under-represented on national committees and can be suspicious of the process.

17. NGOs have more significant representation as Liaison organizations.

18. Other participants such as consultants and academics provide specific expertise. They do not generally advocate the positions of a constituency.

19. The process for adopting international standards is similar to the process for approving national standards. Consensus among stakeholders must be achieved for a standard to be approved.

20. Some countries adopt international standards through an administrative procedure.

21. It is unlikely that ISO 14001 will be cited in legislation or regulation.

22. ISO 14001 is being actively recognized and piloted by regulators in ways other than formal citation in regulation.

23. Regulators in many countries are providing or are actively considering providing regulatory relief to organizations registered to ISO 14001.

24. Regulatory relief means relief of the administrative burden, not relief from regulatory requirements.

25. Few countries have come to terms with how to use the ISO 14000 series for procurement.

26. The governments of many countries provide funds to support participation in the ISO development process, training and implementation, and certification to ISO 14001.