

1997

Compliance with Private Voluntary Agreements: The Example of the International Organization for Standardization's ISO 14000

Naomi Roht-Arriaza

UC Hastings College of the Law, rohtarri@uchastings.edu

Follow this and additional works at: http://repository.uchastings.edu/faculty_scholarship



Part of the [Environmental Law Commons](#), and the [International Law Commons](#)

Recommended Citation

Naomi Roht-Arriaza, *Compliance with Private Voluntary Agreements: The Example of the International Organization for Standardization's ISO 14000*, 29 *Stud. Transnat'l Legal Pol'y* 205 (1997).

Available at: http://repository.uchastings.edu/faculty_scholarship/692

This Article is brought to you for free and open access by UC Hastings Scholarship Repository. It has been accepted for inclusion in Faculty Scholarship by an authorized administrator of UC Hastings Scholarship Repository. For more information, please contact marcusc@uchastings.edu.

Faculty Publications

UC Hastings College of the Law Library

Author: Naomi Roht-Arriaza

Source: Studies in Transnational Legal Policy

Citation: 29 STUD. TRANSNAT'L LEGAL POL'Y 205 (1997).

Title: *Compliance with Private Voluntary Agreements: The Example of the International Organization for Standardization's ISO 14000*

Originally published in STUDIES IN TRANSNATIONAL LEGAL POLICY. This article is reprinted with permission from STUDIES IN TRANSNATIONAL LEGAL POLICY and American Society of International Law.

CHAPTER 6

**COMPLIANCE WITH PRIVATE VOLUNTARY
AGREEMENTS: THE EXAMPLE OF THE
INTERNATIONAL ORGANIZATION FOR
STANDARDIZATION'S ISO 14000
ENVIRONMENTAL MANAGEMENT AND
RELATED STANDARDS**

by Naomi Roht-Arriaza

Most thinking to date about compliance with international agreements has been based on treaties created by states, which impose obligations on state actors and set up various methods of monitoring and enforcing compliance.¹ The agreements I want to explore are fundamentally different in that (1) they are negotiated within a forum where private actors are dominant, although states participate; (2) the standards developed in this forum apply directly to private organizations, without the required mediation of any state agency; and (3) they rely on market mechanisms, at least in part, to assure compliance. I will concentrate on agreements in the area of environment, in particular on the Environmental Management Systems (EMS) and related standards—ISO 14000 series—developed by the International Organization for Standardization (ISO).²

ISO is a federation of over 100 national standardization bodies, one from each represented country. It was formed in 1946 to harmonize technical requirements and standards in industry. Each national body establishes the composition of its delegations, which should include a mix of producer, consumer and other relevant interests; while it can, and often does, include government officials,

states have no pride of place. Recognized national bodies that wish to become involved in a given standard-setting exercise do so by sending delegations to international meetings where standards are hammered out.³

Over forty countries are members of the technical committee, known as TC 207, in charge of drafting the ISO 14000 standards. The committee is composed, in turn, of sub-committees dealing with environmental management, auditing, performance evaluation, labeling, life-cycle assessment and terms and definitions.⁴ The subcommittees are further divided into subgroups preparing a discrete portion of the set of standards and guidelines. After the subcommittees agree on a draft text, it is brought to the whole committee for approval. Once TC 207 has approved a draft, it is then sent out for balloting to the entire ISO membership. Two-thirds of the member organizations must approve the draft, and no more than a quarter of the votes may be negative votes rather than abstentions.

In the late 1980s, ISO pioneered a global standard for quality control management, the ISO 9000 series. ISO 9000 set out procedures and systems to ensure adequate feedback and control systems for quality management, subject to periodic auditing as well as verification by a private outside entity, who would then certify the organization to the standard.⁵ This was one source of the model for development of environmental management standards.

Other factors leading up to development of these standards were the proliferation of eco-labeling programs in different countries as well as of private corporate codes of conduct. In 1991, the Business Council for Sustainable Development (BCSD) began creating international standards that would allow businesses in various sectors to measure their environmental impacts according to comparable criteria.⁶ The BCSD's initiative dovetailed with that of a coalition of socially responsible investors in the United States, who in 1989 published the Valdez Principles, a set of voluntary commitments intended to be used by investors to favor environmentally responsible corporations.⁷ Corporations that signed on to the principles were supposed to: minimize pollutants, resource and energy use and waste generation; inform consumers of the environmental impacts of their products and services, complete and make public an annual self-audit of environmental progress and work toward creation of independent environmental audit procedures to be made available to the public; and establish management and board structures to oversee environmental performance. Other similar initiatives include the Business Charter

for Sustainable Development and the Global Environmental Management Initiative (GEMI). To join, companies simply sign up; public pressure is the only means of monitoring compliance with the commitment. Sectoral codes of conduct, such as the Chemical Manufacturers Association "Responsible Care" program, also appeared.⁸

Most important, the European Community adopted a Regulation setting up an Eco-Management and Auditing Scheme (EMAS).⁹ Under EMAS, industrial sites establish systems to analyze the effects of their activities on the environment, make public a certain amount of information on those effects, and continuously improve their performance in minimizing these effects, all verified by an outside evaluator. Companies based outside Europe began worrying that such a scheme might provide an unfair advantage to European producers in European markets, and so pushed for a global standard on environmental management and auditing.

The ISO 14001 environmental management system standard is the centerpiece of the 14000 series. To comply, company management must define the organization's environmental policy and ensure that it is appropriate to the nature, scale and environmental impacts of the organization's activities. Each registered facility must commit to continual improvement, to compliance with local laws, and to prevention of pollution (very broadly defined). The environmental policy must be publicly available, but assessments of environmental impacts need not be published. Each organization must set up procedures to identify the environmental effects of its activities, create and maintain procedures to document these activities, identify individual responsibilities, train appropriate personnel, and prepare an emergency response plan. These activities must be periodically monitored and corrective action taken in cases of noncompliance. Environmental audits, whether internal or external, are required. Such audits may be used by certification bodies to help verify conformance with the EMS. There are no substantive minimum/maximum amounts for pollutants, resource use, wastes or the like; harmonization of such requirements was considered beyond the scope of a systems approach.

The existence of an adequate system may be self-certified or a firm may seek outside verification to certify that it conforms to the standard. Certification allows the organization to publicize its compliance to potential buyers. While the 14001 EMS is the only standard to which an organization may be certified, the ISO 14000

series also includes a “guidance document” providing more detailed information on EMSs, and environmental auditing standards which set out methodology for audits and qualifications for auditors. It will also include labeling standards which cover goals and criteria for environmental labeling, for specific methods and criteria for manufacturers’ self-declaration claims, *e.g.*, product attributes like recyclability, and for “seal of approval” programs like Green Seal or Blue Angel. Other related guidelines will deal with life-cycle assessment and with environmental performance indicators—how to measure improvements. The EMS standard and guidance document and the auditing standards have recently reached the final drafting stage, while the others will take another 1–4 years to complete.

In evaluating both potential compliance with the standards and their effectiveness in improving corporate environmental performance, one interesting question is the extent to which either depends on the process by which the standard is created. A key proposition of recent international law writing has been that legal norms enjoy higher compliance rates if they are perceived as legitimate.¹⁰ One technique to boost legitimacy is to ensure that the drafting forum adequately represents the interests of stakeholders.

The ISO’s formal rules attempt to insure a balance among producer, consumer (including environmental and other NGOs) and government interests. In practice, the EMS drafting process was dominated by large global corporations and by disputes between the U.S. and European delegations. The formal equality of participants, the lack of state predominance and the stated desire for balance stand in contrast to the reality of domination by those interests with the most money to attend the drafting meetings on a regular basis, with the greatest economic stake in the outcome and with the technical expertise to understand the arcane nature of some of the discussions. Small and medium enterprises, NGOs, and developing country delegations played marginal roles, at least until very late in the drafting process. NGOs and some developing countries have complained of a lack of access to documents or notice of meetings, and NGOs especially have seen their role relegated to that of “damage control.” The private nature of the process has meant that agendas, current drafts and topics under discussion have been difficult for non-participants to obtain.

The contrast between formal openness and inclusiveness and informal concentration of influence over the outcome raises a host of research questions: is there some set of conditions under which formal equality in a private negotiation will coincide with informal

openness and ability for all major stakeholders to have input into the final product? Or when corporations, NGOs and states come into a negotiation as formal equals, will the actors with the most money and most concentrated set of interests always dominate? And if not, will the voluntary nature of the standards, and the fact that global corporations will be their main “consumers” lead to the same result? The answers have important implications for the design of participatory negotiations, especially given persistent NGO calls for more access and participation in international rule-making processes.

Given the limitations of the drafting process, should we expect compliance with the standards to be concentrated in the large global corporations, based in developed countries, that were the prime movers behind their adoption? On the one hand, it seems likely that these will be the first firms to qualify for certification under ISO 14001, in large part because most of them already have management and auditing systems in place. To date, most industry observers say that these corporations will put in place the appropriate systems, but will not necessarily spend money on formal certification unless market forces or domestic regulators demand it. On the other hand, the degree of enthusiasm and talk about the standards in large developing countries like Korea and Brazil is inconsistent with the hypothesis that representativity matters; while both delegations have been playing a more active role recently, they only became active after the basic architecture of the standards was in place.

Developing country enthusiasm is most likely explained because the standards are weak enough substantively that they seem like a relatively painless way for developing country industries to gain acceptance into the club of “green” producers and head off the threat of future trade restrictions. This is so in large part because the U.S. delegation took the position that more stringent or substantive standards would become trade barriers that would favor developed over developing country industries. The U.S. delegation undoubtedly had its own reasons of self-interest for propounding this argument, but the result was that the U.S. in effect represented the interests of the developing countries. This is a relatively rare outcome in international negotiations, and bears closer scrutiny.

The goals and methods of enforcing compliance with private voluntary standards differ substantially from those involved in enforcing public agreements. The drafters of the ISO 14000 series standards have carefully distinguished their goals from those of typical government regulation. Rather than attempt to agree on

substantive types or amounts of pollution, or resource use reductions, or changes in industrial processes or inputs, the idea is to adopt a management systems approach. This approach, as discussed above, tries to get all relevant decision-making levels within an organization to consider environmental aspects of their decisions. No substantive goal is envisaged: the drafters are quite clear that implementation of the standards will not necessarily result in any real environmental improvement at all. The hope is that by creating better and more widely distributed information within the corporate structure, people will be moved to improve their environmental performance. Moreover, this approach is seen as appropriate precisely because it does not mimic, conflict nor compete with the attempts of public regulatory agencies. And because it is solely process-based, it avoids the kinds of fights over possible trade barriers that would attend any attempt to design a uniform substantive standard.

This approach was not uncontested during the drafting process. European country delegations especially sought more performance-based provisions and better language regarding public access to information, while the U.S. delegation was concerned with the possible disadvantageous uses of information in domestic regulatory and litigation arenas. In the end, the U.S. approach largely prevailed. The victory of the “proceduralists” may be shortlived, however, if opposition by governments and NGOs drains the effort of its legitimacy and, therefore, of a major incentive for firms to sign on.

Most developed country regulators are somewhat skeptical of the lack of substantive standards and public access to information. The European Commission has made clear it will require extra steps beyond certification to allow implementation of ISO 14001 to serve as partial compliance with EMAS requirements.¹¹ In the United States, the Environmental Protection Agency (EPA) has taken a wait-and-see attitude, although some local administrators and state officials are more enthusiastic. NGOs, while many only recently have become aware of the implications of ISO 14000, are also cautious. Several large Washington-based NGOs, *e.g.*, the National Wildlife Federation and the Environmental Defense Fund, and a few international, *e.g.*, the World Wildlife Fund and the Center for International Environmental Law, have followed the negotiations for some time, and one eco-labeling representative (Green Seal) has headed a subcommittee. Most others have remained aloof, seeing business domination of the forum and the talk of regulatory breaks

as proof that the effort is mere “greenwash.” If ISO-certified companies begin publicly to tout their certification as a mark of environmental superiority, or seek regulatory advantages on that basis, NGOs will likely step up their opposition to the scheme. As a voluntary scheme dependent in large part on public and regulatory perceptions, concerted NGO opposition could be fatal.

Even if the scheme wins widespread acceptance, compliance is not the same as effectiveness. Indeed, one of the major problems with self-regulation is that a high degree of compliance is possible precisely because standard setters demand little of themselves, and the results are therefore ineffective. The current standards may be quite effective in trade terms, defusing an otherwise difficult conflict between trade and environment and facilitating global commerce. They may, however, do little or nothing to improve environmental outcomes. Moreover, because under ISO 14001 information need not be made public, independent efforts to measure effectiveness in terms of real improvements in environmental performance may be difficult if not impossible. Nonetheless, a series of questions about changes in operations, processes or training, combined with changes in the environmental parameters required to be reported by existing or new environmental laws, may give some indication of effectiveness.

Under the ISO 14000 scheme, compliance is to be enforced through audits and certification. While self-certification is a possibility, it may not be credible, and many companies will turn to third-party certification by registered certifiers. These will be consultants with expertise in EMS, auditing and environment who will assure that the management systems are in place and are working as intended. Debates have focused on the nature and qualifications of verifiers and auditors, including their geographic distribution (local vs. European vs. U.S.) and their competence (big auditing or quality control firms vs. environmental specialists). Plans are underway to develop uniform guidelines for verifier selection, training, and protocols. But for now, verifiers must only meet national qualifications, and their methodology and training vary significantly from country to country.

One of the weaknesses of ISO 14000 compared to other private codes of conduct, or to the European EMAS regulation, is that it does not require publication of information on emissions, resource use or other environmental impacts. This reduces the possibilities of using information as a spur to compliance. Through yearly reports on emissions, waste, resource use and other parameters, it is possible

for interested parties to monitor whether adherence to the code/standard has resulted in improvements or has been an empty gesture. In this regard the information-based requirements of EMAS and of some other codes of conduct parallel monitoring and reporting requirements under public law. In the same way, monitoring and reporting are aimed at (1) making sure relevant decision makers are aware of environmental information (the EMS requires organizations to ensure that top management has responsibility for decisions affecting environmental performance) and (2) using the publication of information as a way of shaming scofflaws and rewarding compliance through NGO and community pressure. Only the first of these goals will be satisfied under ISO 14001.

Whether through information provision or third-party certification, the standard is designed to encourage adherence through market mechanisms. Certification is not intended as a consumer-oriented label. Indeed, environmentalists fear that it will be misused as a marketing tool connoting a level of environmental excellence that may be undeserved. It is, however, aimed at purchasers of intermediate goods, public procurement agencies and private companies seeking suppliers, who will require ISO certification or at least evidence of compliance with the standards. According to lawyers who represent transnational corporate clients, this is already beginning to happen, and they expect that within a short time adoption of the standards will be *de facto* mandatory for doing business in one or more large global markets.

The nature of market-based compliance raises a series of questions for future research. First, to what extent is public information—actual figures on performance in addition to a general policy statement—necessary to ensure that firms comply? And even if such information may not be necessary to exert public pressure for compliance, is it necessary to translate compliance into effective environmental improvements? My hunch is that this is the case, but case studies would be useful. More generally, we understand little about the interactions and synergies between public and private forms of international and domestic agreements. In this case, domestic regulatory climates combine with international trade agreements and debates to create a private global agreement which will then be enforced through domestic regulation and global market mechanisms. The relative importance of the domestic regulatory climate vis-à-vis other factors, for instance, remains unclear. It also remains unclear if the efforts among transnational corporations to

harmonize their environmental practices worldwide would take place even without regulatory requirements in a major market to do so.

Second, a number of issues revolve around the use of third-party certifiers. Most certifiers, at least initially, will come from the ranks of the large consulting/auditing firms that now certify companies to the ISO 9000 series quality control standards. Indeed, proponents of ISO 14000 argue that certification to both standards can be done almost simultaneously, so it makes sense for firms seeking ISO 9000 certification to put both systems in place at the same time.

One advantage to market-based compliance may be that firms seeking certification must expend the funds to pay for an adequately-trained and accredited certifier of their environmental performance, thus thrusting some of the costs of enforcement that would normally be borne by the public onto the private sector. However, this will only be beneficial if (1) certifiers have the proper training to look not only at management systems but at highly technical environmental process and waste issues, and (2) private certifiers are at least no more subject to “capture” than their public counterparts would be, in order to maintain the credibility on which their usefulness depends. Neither of these two conditions are necessarily present. It would be useful to look in detail at how certifiers are accredited, perceived in various communities, how they perform their job, and how they see their own role. The degree of oversight of certifiers by national accreditation bodies also bears exploring; if it varies substantially among states, some of the benefits of a single global standard may be dissipated.

Third, it is not clear why purchasers, procurement agencies, banks, insurers, or other actors in the market would require 14001 certification or compliance with the standard. The market-based approach of ISO 14000 is modelled on the success of the ISO 9000 quality control standards. Starting from acceptance and integration into procurement programs in Europe, the ISO 9000 standards are now being eagerly sought by U.S. businesses and are required by major purchasers, including the Defense Department and automakers. However, purchasers and procurement people have concrete and self-interested motivations for requiring quality control certification—it reduces the risk of defective products. In the ISO 14000 case, there is no such immediate reason of self-interest to require certification from suppliers. Nor are potential customers the only constituency for an effective standard. Corporate environmental behavior affects many outside the market chains, including local communities and local and global ecosystems.

At most, there may be self-interested pressures on banks and insurers seeking to reduce their own potential exposure to environmental liability if their clients have working EMSs in place. But any pressure from purchasers and/or procurement agencies will have to be based on a different set of concerns, which might include: a desire to appear “green” or to break into new markets where consumers value “green” goods; regulatory requirements that give preference to environmentally superior products; adherence to EMAS, which requires that certified companies prefer other companies that comply with the standards; or lessened regulatory scrutiny when purchasing from ISO-certified suppliers or having ISO certification. Future research should focus on the extent to which market forces push companies towards certification, whether there are differences between large vs. small companies or their location (North vs. South), and should compare the effectiveness of banks, insurers, purchasers or procurers in convincing their customers/suppliers/clients to adhere to the standards.

Similar issues apply to the companies themselves. Since ISO 14001 certification involves substantial costs to an enterprise,¹² why would a company choose to incur them? In a sense, this is analogous to the question, in the public law context, of why states would sign on to or comply with soft law. Several possible answers exist:

First, adherence to an EMS may result in cost savings, both in terms of production efficiencies and avoided litigation or fines.¹³ Second, firms may wish to establish or hone their “green” image. Third, they may already be seeking ISO 9000 certification and find it advantageous to certify to ISO 14000 at the same time, without much concern for the environmental implications.

Some firms may see adherence to the standard as a way of preempting more stringent or intrusive forms of public regulation. Industry has often turned to self-regulation as a perceived alternative to “command-and-control” rules or as a way to reduce public oversight of their activities. Acceptance of the standards may well be driven by either the perception or the reality of diminished national regulatory oversight for companies which can show compliance with the standards. In the United States, some of the possibilities include fewer inspections, smaller non-compliance penalties, leniency of sentencing in cases involving environmental crimes, the ability to keep more internal records secret (under “environmental audit” privilege laws) and even complete exemption from some “command and control” regulation.¹⁴ These possibilities constitute one of the major potential attractions of the standards

from industry's standpoint, and fit nicely into an overall policy climate where replacing command and control with voluntary incentive programs is the order of the day.

Finally, firms may wish to avoid or preempt other international or domestic requirements on environmental issues which might act as trade barriers, keeping their goods out of lucrative markets with stringent rules. As an international standard, ISO 14000 is entitled to a presumption of legality under GATT/WTO rules; it may well be seen as a way to provide an international framework for trade-related environmental measures which minimizes developing countries' fears of "eco-imperialism," green protectionism and the like. Indeed, one of the major discussions in the Asian context has been the extent to which certification standards, and especially eco-labeling programs, constitute trade barriers. Developing countries have been keen to assure that the emerging standards do not subtly favor the goods of developed countries where most current eco-labeling programs exist. More positively, compliance may be seen as a way to break into markets where consumers value environmental probity.

Future research might focus on which motivations, or what combination of motivations, are key, and if there are variations among regions or among different size companies. Initial research indicates, for example, that some large corporations selling directly to the public and those based in areas with more ecologically-attuned publics (Europe, for example) may be more motivated by the desire to appear "green," while those in the United States seem to be driven more by the preemptive and, to a lesser degree, cost-savings justifications. For developing countries, the trade implications may be paramount.

A final question concerns the evolution of private standards. There are two possible outcomes: either the ISO 14000 standards will deflect calls for greater international control over the detrimental environmental impacts of global public and private actors, or they will serve as a basis for more substantive standards. Under the first scenario, global business will successfully argue that a systems-based, voluntary approach is enough to ensure improvement while not incurring any of the costs or unwieldiness of an international regulatory system. Under the second, implementation of the current—essentially procedural—systems approach shows that a market-enforced, producer-focused approach is viable and affordable, and pressure mounts to use it to impose evermore substantive international guidelines. This would probably

take the form, first, of requirements to provide more information and, eventually, of sectoral minimum/maximum emissions and resource use “best practice” standards, beginning with those industrial sectors with the greatest technological uniformity and largest environmental impact. These precedents and proposals could serve as building blocks for a substantive set of international voluntary agreements.

Several precursors exist. The Netherlands has pioneered negotiated covenants between government and industry, which can either complement or take the place of mandatory legislation. Such covenants may commit either an industry association or individual industries and are enforceable through civil law. They have been used to reduce the quantity of phosphates in surface water, to reduce air emissions and to reduce discharges by the packaging, graphics, metallurgy, dairy and chemical industries.¹⁵ Denmark and the Flemish region of Belgium have passed laws allowing for public enforcement and sanctions of such negotiated agreements. The European Commission is discussing region-wide negotiated agreements on a company or sectoral level.¹⁶ In the United States, several companies have entered into substantive “Good Neighbor Agreements” wherein they agree to local community participation in, and review of, environmental audits as well as substantive changes in operations.¹⁷

These precedents may be translatable to the sphere of private, voluntary agreements under pressure from NGOs and others. On the other hand, the private, standard-setting model may not lend itself to these kinds of substantive agreements, leaving it to states to impose such agreements. It remains to be seen how much can be accomplished by private actors and market forces. In either case, the evolution, implementation and effectiveness of these private voluntary agreements provides a rich research agenda for the next few years.

Endnotes

- 1 *See, e.g.*, ABRAM CHAYES & ANTONIA HANDLER CHAYES, *THE NEW SOVEREIGNTY: COMPLIANCE WITH INTERNATIONAL REGULATORY AGREEMENTS* (1995).
- 2 For more extensive discussions of the development and content of the ISO 14000 series standards, see Naomi Roht-

Arriaza, *Shifting the Point of Regulation: The International Organization for Standardization and Global Lawmaking on Trade and the Environment*, 22 *ECOLOGY L.Q.* 479 (1995); Naomi Roht-Arriaza, *Private Voluntary Standard-Setting, the International Organization for Standardization and International Environmental Lawmaking*, 7 *Y.B. INT'L ENV'T'L L.* 149 (1996).

3 See INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *MEMENTO* (1993).

4 See Joe Cascio, *International Environmental Management Standards: ISO 9000's Less Tractable Siblings*, *ASTM STANDARDIZATION NEWS* 44 (Apr. 1994).

5 For a fuller description, see, for example, PERRY L. JOHNSON, *ISO 9000: MEETING THE NEW INTERNATIONAL STANDARDS* (1993).

6 STEPHAN SCHMIDHEINY, *CHANGING COURSE: A GLOBAL BUSINESS PERSPECTIVE ON DEVELOPMENT AND THE ENVIRONMENT* 30 (1992).

7 The Valdez Principles have now become the CERES Principles. Coalition for Environmentally Responsible Economies, *1990 CERES Guide to the Valdez Principles*, in *CORPORATE ENVIRONMENTAL RESPONSIBILITY: LAW AND PRACTICE* 257 app. (John R. Salter ed., 1992).

8 Responsible Care is mandatory for CMA members. Companies must sign on to ten guiding principles and six codes of management practices. A fifteen member public advisory panel counsels CMA, and member companies gauge their progress through yearly self-evaluations. Chemical Manufacturing Association, *Responsible Care Programme*, in *CORPORATE ENVIRONMENTAL RESPONSIBILITY: LAW AND PRACTICE* 268 app. (John R. Salter ed., 1992).

9 Council Regulation 1836/93 on Creating an Eco-Management and Auditing Scheme, 1993 O.J. (L 168) 1. The Regulation became effective as of April 1995.

- 10 *See, e.g.*, THOMAS FRANCK, *THE POWER OF LEGITIMACY AMONG NATIONS* (1990); CHAYES & CHAYES, *supra* note 1, at 133–34.
- 11 *See, e.g.*, *Two Decisions Officially Recognize ISO 14001 As Covering Majority of EMAS Rule*, [Current Reports] Int'l Env't. Rep. (BNA) (May 14, 1997).
- 12 One estimate gave the cost of ISO 9000 certification at around \$200,000 for a large enterprise, and \$55,000 for a small firm, with ISO 14,000 certifications expected to be about the same. Bruce R. Kean, *Dangers and Weaknesses*, in Australian Centre for Environmental Law, *ISO 14,000: Regulation, Trade and Environment* (July 2, 1996 conference in Canberra) (unpublished paper).
- 13 Many U.S. companies, for example, have become advocates of waste minimization and pollution prevention because of the cost savings involved. *See, e.g.*, OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS, *SERIOUS REDUCTION OF HAZARDOUS WASTE: FOR POLLUTION PREVENTION AND INDUSTRIAL EFFICIENCY* (OTA-ITE-317) (1986).
- 14 *See, e.g.*, Ira Feldman, *Escape From Command and Control?*, ENVTL. F. 39 (1996). In Canada, one court has already imposed a 14,001 certification requirement on a company which had exceeded its permitted emissions. *See Canadian Court Includes ISO 14,001 Certification Requirement in Order*, BUS. & ENV'T 2 (1996).
- 15 *See, e.g.*, Niels S.F. Koeman, *Bilateral Agreements Between Government and Industry in Dutch Environmental Law*, 2 EUR. ENVTL. L. REV. 165 (1993).
- 16 *See* European Commissioner for Environment Ritt Bjerregaard, *Address at the UNICE Seminar, Brussels, Belgium* (Mar. 25, 1995).
- 17 *See* SANFORD LEWIS, *PRECEDENTS FOR CORPORATE COMMUNITY COMPACTS AND GOOD NEIGHBOR AGREEMENTS* (Good Neighbor Project 1995).