

Managing a Better Environment: Opportunities and Obstacles for ISO 14001 in Public Policy and Commerce (March 2000)

**Jason Morrison, Katherine Kao Cushing, Zoe Day,
and Jerry Speir**

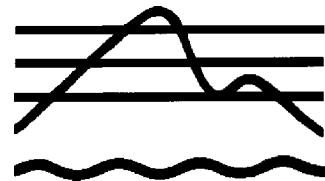
Executive Summary



An occasional paper of the:

**PACIFIC INSTITUTE FOR STUDIES IN DEVELOPMENT,
ENVIRONMENT, AND SECURITY**

654 13th St.
Oakland, CA 94612 USA
510.251.1600 (ph.)
510.251.2203 (fax)
pistaff@pacinst.org
www.pacinst.org



Overview

Environmental policy is in transition. Many observers believe that the existing regulatory system, though it has accomplished great improvements in environmental quality, is approaching the limits of its effectiveness. Government regulators and policy analysts are seeking better ways to address the many issues, like non-point source pollution, that remain largely unregulated. Most corporations are seeking more cost-effective ways to meet regulatory requirements, and some leading corporations are recognizing environmental protection as part of their mission (and their image). Non-governmental organizations (NGOs) and local communities want a cleaner and safer environment, and are trying to ensure that their voices and interests are heard. “Environmental management systems” (EMSs) are emerging as an important tool in all those efforts.

In response to a proliferation of EMSs, many efforts have been made in recent years to standardize them. As part of this undertaking, the International Organization for Standardization (ISO) developed ISO 14001, now the dominant EMS standard worldwide. ISO 14001 is only one standard in the ISO 14000 series, which includes standards for auditing procedures, measurement and evaluation of an organization’s environmental performance, “green labeling,” and assessment of the full range of environmental impacts associated with an organization’s products and activities (termed “life cycle assessment”). This report examines the nexus of these standards with public policy and the potential for far-reaching impacts on environmental quality and the manner in which governments, industries, and NGOs interact on environmental protection issues.

EMSs provide a mechanism for organizations of any size to improve the way they manage their environmental activities. EMSs are comprehensive (i.e., encompass the entire production process), and strive for “continual improvement” – rather than focusing on fixed discharge limits and “end of the pipe” pollution abatement and controls, as does the current regulatory system. ISO 14001 is a basic EMS; it provides a general framework for the role of top management, the setting of performance objectives, employee training, documentation, and continual assessment of the system’s performance. A private certification system potentially offers objective evidence that an organization has fulfilled the standard’s requirements. Implemented conscientiously, ISO 14001 would be an excellent tool for the management of society’s environmental impacts. However, it was not intended as a policy instrument, and implemented without transparency and accountability, ISO 14001 could in fact be counter-productive.

While the potential environmental benefits of the ISO 14000 environmental management standards are substantial, there are many unanswered questions about how they will be applied in practice and their ultimate effect on environmental quality. This study is the result of a two-year investigation of the development, implementation, and potential applications of the ISO 14000 series both in the U.S. and internationally, with a principle focus on the ISO 14001 EMS standard. Our goal is to clarify the benefits and limitations of the ISO 14000 standards and to evaluate their effects on society and public policy generally. We examine the standards in the context of their potential to advance the “three Es” of sustainable development – economy, environment, and equity.

Our analysis covers both the creation of the standards and their implications for global commerce and environmental protection. We pay particular attention to ISO itself and argue for changes in the organization’s membership. We then discuss the ISO 14001 EMS standard – its essential requirements and its certification process – and follow that with an assessment of the benefits and limitations of EMSs. Three case studies are provided, describing the emergence of ISO 14001 as an environmental regulatory tool in the United States. Finally, we offer conclusions and recommendations on how the ISO 14000 series standards might be integrated into existing commercial practices, regulatory structures, and trade regimes in a socially equitable and environmentally beneficial manner.

The ISO 14000 Environmental Management Standards

ISO is a global federation of more than 130 national member bodies, created shortly after World War II to develop international manufacturing and communications standards. Multi-national corporations of the late 1940s anticipated that the standardization of machinery, measurement systems, and manufacturing processes would be essential to ensure efficient commerce in an expanding international market. Since then, ISO's focus has evolved from standardizing technical specifications for products and manufacturing processes to providing guidance and specification standards for overall management systems – first with quality management systems (the ISO 9000 series of standards) and more recently with environmental management systems. The work of ISO has traditionally been heavily influenced by private sector firms, whose interests the standards have primarily served.

In September 1996, ISO published the first of the ISO 14000 series standards, including ISO 14001. By December 1999, roughly 13,370 organizations in 75 countries were certified to the ISO 14001 EMS standard. Organizations in the European Union and Japan accounted for almost 70 percent of the certifications. As of February 2000, ISO had released most of the remaining guidance standards in the ISO 14000 series, including the standards on life-cycle assessment, environmental labeling, and environmental performance evaluation.

Major Conclusions

- 1. Environmental management systems can further principles of sustainable development by effectively reconciling social and environmental objectives with economic goals.**

EMSs can incorporate environmental considerations into day-to-day business functions and management decisions – a precursor to more sustainable patterns of development.

Early evidence suggests that EMSs can help companies achieve improved environmental performance, while simultaneously realizing cost savings and garnering external recognition as good corporate citizens. The iterative process of defining, documenting, and continually improving management practices makes EMSs promising mechanisms for improving the environmental performance of both private and public sector organizations. If these findings hold true in the long term, it will be in the public interest to have as many companies as possible adopt these comprehensive systems for managing for the environment. Many firms around the world, particularly small and medium-sized enterprises and facilities in less developed countries, have no such systematic and comprehensive environmental management programs.

EMSs can help regulatory agencies achieve policy objectives.

EMSs are emerging as key tools in regulatory innovation and have the potential to address a myriad of environmental issues that cannot be addressed through the existing regulatory system. More specifically, EMSs are attractive from a public interest perspective because they can encompass environmental impacts that are not presently regulated (or are minimally regulated), such as energy, water, and raw materials consumption, greenhouse gas emissions, solid waste production, and non-point sources of pollution.

Much of the promise of EMSs lies in their power to generate valuable information. A consistent and reliable method of collecting and communicating environmental performance data is one of the greatest potential benefits that an EMS can provide for public policy.

The U.S. federal government, many states within the U.S., and other governments around the world are actively experimenting with EMSs, particularly ISO 14001, as supplements to existing regulatory regimes. The most promising approaches involve one or more “performance tiers” above the existing “command-and-control” tier, in which organizations are rewarded with regulatory benefits in exchange for superior environmental performance.

The use of EMSs in credible and transparent performance-based regulatory programs may lead to more efficient use of public resources, as it could allow regulators (as well as public interest organizations) to focus limited resources on industry laggards. Freed-up agency resources could also be directed toward compliance assurance programs for small and medium-sized enterprises that may need greater assistance. If regulatory agencies’ goal of improved environmental quality can be achieved in a manner that is more economically efficient than prior approaches, then societal goals of a healthy environment and economy are better served. Likewise, more efficient regulatory programs may enable industry to reallocate resources previously expended on bureaucratic paperwork toward better environmental technologies and programs.

An unintended benefit of using EMSs as a policy tool has been the establishment of new partnerships and improved relationships among stakeholders.

In some cases, EMS pilot projects in the U.S. have led to improved relationships between regulated facilities and regulators. New partnerships among federal, state, and local governments are also emerging in these programs. There have also been notable improvements in the relationship between regulated facilities and environmental NGOs and community groups that have participated in some pilot programs. Negotiated EMS performance agreements engender a fundamentally different relationship between government authorities and regulated entities – one that is based more on cooperation than confrontation.

2. The ISO 14000 series standards can play a positive role in the “greening” of global commerce by serving as the basis for private environmental trade policies that promote improved environmental performance.

Major multi-national corporations have already begun requiring or strongly recommending that their suppliers conform to the ISO 14001 standard. Such market pressure may promote better environmental practices generally and may address non-regulated environmental impacts on an international scale. Private trade policies represent one of the few mechanisms that can span international borders and affect the environmental practices of firms globally. Many of the ISO 14000 standards can address product design and production process issues – areas with significant environmental implications that are not addressed under current trade law.

On the other hand, the standards may restrict market access for small and medium sized enterprises and firms in less developed countries that may not be able to bear the implementation and certification costs.

While the ISO 14000 standards will not be mandated by international law, conformity to them may become a *de facto* requirement for doing business, as has happened with the ISO 9000 quality management standards in some industries. The increasing number of multi-national corporations that are “encouraging” their suppliers to become ISO 14001 certified suggests a similar trend. Small firms in developed and less developed countries may face disproportionate costs, technical hurdles, and infrastructure difficulties, precluding implementation and third-party certification to ISO 14001.

Without the provision of technical and financial assistance, ISO 14001-certification mandates by large corporations may promote “paper EMSs” in which certification to the standard is nothing more than a bureaucratic exercise that does not result in improvements in environmental performance.

If ISO 14001 certification becomes a requirement for doing business, organizations may focus too much on simply becoming certified and lose sight of the goal of actually improving their environmental management and performance. Sweeping supply-chain demands by multi-national corporations also risk lowering the standard of certification, as national standard-setting bodies, particularly those in less developed countries, will be under heavy pressure to reduce obstacles to certification so that domestic firms will not be excluded from international markets. A race to become ISO 14001 certified solely for the sake of certification would erode its value as a tool for better environmental management.

3. Though ISO 14001 can serve as a valuable internal management tool, its ability to meet public policy objectives and address societal expectations for corporate accountability is limited.

ISO 14001 is but one of many environmental management system models, even though it is rapidly becoming the dominant EMS model globally. As a baseline international EMS standard, ISO 14001 lays out a flexible framework in which all organizations, regardless of size, location, or resources, can benefit from its use. ISO 14001 may be one of the most user-friendly frameworks for systematically identifying environmental impacts of an organization’s operations, setting associated performance goals to reduce those impacts, and monitoring and documenting environmental performance.

ISO 14001 alone cannot satisfy public policy objectives.

Because certification to ISO 14001 does not denote that minimum performance levels are being met – or even make it possible to ascertain an organization’s regulatory compliance status, government agencies in the U.S. and abroad have begun to build additional components around the standard in their performance-based regulatory experiments. Their policy goals include overall improvements in environmental quality, increased compliance rates, and the engagement of local communities. That engagement, whether through participation or the provision of information, is considered important to the credibility of these experiments.

Components added to the basic 14001 EMS to address its policy shortcomings include environmental performance reporting, compliance assurance programs, an emphasis on pollution prevention, and stakeholder involvement in the design and implementation of EMSs. These additional components are not likely to be mandated by law, but instead will apply only to companies that voluntarily elect to participate in performance-based regulatory initiatives. ISO 14001, together with these additional components, can indeed satisfy public policy objectives.

Certification to 14001 should not be mistaken for certification of environmental excellence, since no environmental performance obligations exist in the standard.

ISO 14001 certification merely denotes that an organization has established a management system; it says nothing about the organization’s actual environmental performance. A major concern is that those unfamiliar with the standard might incorrectly perceive ISO 14001 certification as signifying a “green” company. A related concern is the possibility of misguided attempts by lawmakers and regulators to accept ISO 14001 certification alone as worthy of special regulatory treatment.

The ISO 14001 certification function in the United States is currently neither consistently applied nor rigorous and lacks the credibility needed for use in public policy.

Current requirements for registrars lack stringency. There is a disparity among accredited registrars in the U.S. in terms of their experience in the fields of environmental engineering, natural sciences, and environmental regulation. Inconsistent approaches in the content and scope of certification audits are also problematic. Without a degree of assurance that certified EMSs have been subject to a baseline level of scrutiny by similarly qualified registrars, the integrity and value of the certification process is greatly undermined and its use for public policy purposes limited.

4. The single most important factor undermining the credibility and value of the ISO 14001 standard is the absence of a meaningful public reporting requirement.

The ISO 14001 certification function will have limited meaning to external audiences until it is sufficiently linked with environmental performance through a reporting requirement.

Because ISO 14001 is a *systems* standard, certification, even if credible, only tells external stakeholders that the system conforms to the management prerequisites spelled out in the language of the standard. To the extent that ISO 14001 is used by an organization solely as an internal management tool, the fact that environmental performance levels are not prescribed within ISO 14001 is not an inherent problem. In fact, it is often cited as a positive attribute of the standard, because it offers firms greater flexibility in tailoring the EMS framework to their own needs. But when the EMS becomes a public matter, for example, through advertising claims associated with certification or as part of a regulatory innovation project, the absence of performance requirements, *coupled* with insufficient reporting requirements, means that external stakeholders will not be able to understand what certification means.

It is arguably in the best interest of the users of the standard to work to improve ISO 14001's credibility in the eyes of external stakeholders, because doing so will add value that is not currently being realized from the certification function. Potential external benefits for ISO 14001 users include enhanced corporate image, regulatory cost savings, more effective supply chain management, improved customer relationships, and increased market competitiveness.

ISO 14001 fails to keep pace with the international trend toward increased transparency of environmental information by companies.

The absence of a meaningful public reporting requirement in ISO 14001 makes it inconsistent with existing best practices and widely accepted principles of corporate environmental responsibility. These include the European Union's voluntary regulation, the Eco-Management and Audit Scheme (EMAS), as well as the principles laid out in the International Chamber of Commerce Business Charter for Sustainable Development, the CERES Principles, the Chemical Manufacturers Association's Responsible Care Program, and the recent proliferation of individual corporate environmental reports. The significance of ISO 14001's lack of transparency is that it runs counter to the majority of international norms that increase corporate accountability by providing an opportunity for scrutiny and assessment of companies' environmental management practices and performance by external interests.

5. **ISO's evolution from an institution that promulgates technical engineering standards to one that defines management standards with social and public policy implications has not been accompanied by a parallel shift in the representation of important stakeholders within ISO.**

ISO Technical Committee (TC) 207, the body responsible for developing the ISO 14000 series standards, currently lacks sufficient representation from many regions of the world, including Eastern and Central Europe, Asia, and Africa. Government authorities and NGOs from many countries around the world, including the United States, are also underrepresented within national member bodies.

Major Recommendations

A. Because EMSs have the potential to support a more effective and efficient regulatory system and to promote environmental goals through government procurement programs, their use in public policy deserves further study and consideration.

EMSs, however, should only be used to augment and improve upon the existing regulatory system, not to substitute for or supplant it. An EMS is a vehicle to help an organization manage its environmental impacts, but it does not ensure improved environmental performance. Regulatory innovation that uses EMSs in combination with regulatory benefits or incentives, therefore, must be tied to actual performance improvements, not merely to implementation of a management system.

In order to serve the public interest, key components in EMS-based regulatory programs should include: 1) “beyond compliance” performance as the goal, with compliance as the “floor;” 2) accountability to, and engagement of, external stakeholders; and 3) transparent programs and publicly available environmental performance information.

B. When using EMSs in voluntary regulatory initiatives, government agencies should focus on the environmental information that is derived from the management system.

The most important output of an EMS, for public policy purposes, is public information about performance, measured against some benchmark. Government agencies should focus on defining and extracting the useful information that EMSs can provide. This could include information on environmental matters that are facility-wide, cross-media, and unregulated. Establishing mechanisms for conveying credible information on environmental performance will be an integral part of society's transition toward a more environmentally sustainable and efficient regulatory paradigm.

C. Government agencies should promote the adoption of EMSs that facilitate strong NGO involvement and have meaningful citizen participation.

The ultimate success of integrating EMSs with regulatory innovation may hinge upon the degree to which there is “buy-in” and involvement from NGOs and local communities. EMSs, and ISO 14001 in particular, offer the potential to establish a common language that conveys more meaningful information to these external stakeholders. Today, it is difficult for external stakeholders to distinguish the good environmental actors from the bad. More government efforts and resources should be directed toward addressing NGOs' and the general public's lack of understanding of EMSs and their use in government initiatives.

D. If the ISO 14001 standard is to be used in a regulatory context, it must be augmented with additional elements.

While ISO 14001 was not originally intended as a policy instrument, it is becoming one. To effectively incorporate ISO 14001 into regulatory innovation programs, measures must be taken to assure regulatory compliance, to emphasize the use of pollution prevention techniques, and to promote transparency and accountability to local communities and the general public. Certification to ISO 14001 by itself should not be grounds for regulatory benefits.

E. Amend the ISO 14001 standard to require greater disclosure of information by organizations that are third-party certified.

Companies that adopt EMSs for strictly internal management purposes have no obligation to provide information about the system to external audiences. However, organizations that choose to have their ISO 14001 EMSs third-party certified, and then make public claims about that certification or seek regulatory benefits for it, are making an environmental declaration to external audiences. It is, therefore, of paramount importance that external parties have a firm understanding of what a certified EMS entails. Public reporting of a company's environmental management activities and associated performance offers a mechanism to strengthen the credibility and usefulness of ISO 14001. In particular, it will add business value for the standard's users by serving to deter "paper EMSs," which undermine the integrity of the certification function.

F. Strengthen the ISO 14001 third-party certification process.

At a minimum, national accreditation bodies must ensure that: 1) audits and their resulting reports are carried out in a consistent manner; 2) registrars have adequate backgrounds in environmental engineering/science and environmental regulations; 3) no conflict of interest exists between the facility applying for certification and the registrar; and 4) audits are sufficiently comprehensive and address major regulatory aspects of a facility's environmental activities.

G. Multi-national corporations that mandate ISO 14001 certification of their suppliers should also provide technical and financial assistance throughout their supply chain.

Without assistance, suppliers may focus too much on becoming certified and lose sight of actually improving their environmental management and performance. A race for ISO 14001 certification would undermine its value and credibility, ultimately disadvantaging all of the standard's users. It will almost certainly jeopardize the potential utility of the standard as a tool for better global environmental protection.

H. More partnerships should be established between developed and developing countries to facilitate technology transfer and to equalize the resource burden of adopting ISO 14000 standards.

Mechanisms for implementation of this recommendation include multi-lateral funding and company-to-company partnerships. International lending institutions should provide financial assistance to developing countries that wish to set up the infrastructure for national accreditation systems. Mentoring programs, in which trade associations or companies within a particular industry help a firm in a less developed country offset the costs of implementing the ISO 14001 standard, are another option. Similar mechanisms could support the transfer and implementation of the full ISO 14000 series.

I. ISO, ISO/TC 207, and national mirror organizations, such as the U.S. Technical Advisory Group (TAG), should ensure more balanced representation of appropriate stakeholders in the development of ISO standards that relate to national and global environmental policy.

If the ISO 14000 standards are to function as standards that advance social and public policy objectives, in addition to promoting internal corporate efficiencies, ISO itself needs much stronger representation from all affected parties. Until there is adequate representation by governments, less developed countries, and NGOs, it is inappropriate for ISO to continue work in areas that affect global environmental policy (or other public policy issues, such as health and safety). In keeping with the principles of sustainable development, ISO, ISO/TC 207, and the U.S. TAG should take action to ensure that a broad array of interests is adequately represented in environmental standards development.

Conclusion

To achieve more sustainable patterns of economic development in the 21st century, private-sector firms must greatly improve their environmental performance by more effectively integrating environmental considerations into their strategic planning activities, as well as their everyday business functions and decisions. EMSs can further that integration. Industry representatives have promoted the ISO 14000 series standards as a significant step toward achieving environmentally sustainable business practices. The degree to which the standards will actually lead to significant and measurable advances in environmental protection and serve the public generally, however, will depend on how the issues highlighted in this study are addressed.