ISO Environmental Standards: Industry's Gift to a Polluted Globe or the Developed World's Competition-Killing Strategy?

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Introduction

Voluntary environmental measures for industry have grown in popularity over the past decade. Industry has long been sceptical of command-and-control type environmental regulations, where governments set the rules regarding emissions levels and equipment standards and keep strict watch over firms' compliance. It has argued that such regulations are inefficient and cumbersome, and that they do not give the right incentives for environmental improvement. Industry has tended to prefer voluntary and market-based initiatives to achieve their environmental goals. Such measures are seen to bring not just environmental benefits, but also economic benefits, though improved efficiency as well as an enhanced public image.[1] Recent years have seen states swing their own views on what works best to clean up industry, away from command-and-control type regulations and towards voluntary initiatives.

The ISO 14000 series of environmental management system (EMS) standards, developed by the International Organization for Standardization (ISO) in the first half of the 1990s, has emerged as the dominant voluntary code of industry environmental conduct at the international level. The most important of these standards, ISO 14001 Environmental Management System standard, was adopted by ISO members in 1996, and other standards in the series have subsequently been adopted. Because of their international scope and recognition within the World Trade Organization (WTO) as legitimate standards for trade purposes, the ISO 14000 standards have in a few short years gained wide recognition and acceptance among businesses and states in the North and South alike. By the end of 1999, more than 13,000 firms in 75 countries had obtained certification to the ISO 14001 standard.[2] As firms in both developed and developing countries have begun to adopt them, expectations have grown that adherence to the standards will become a *de facto* condition for conducting business in the global market place.

At the same time there has been growing concern over several aspects of the ISO 14000 standards. First, there is concern over whether improvement in environmental management as called for by the standards results in a concrete improvement in firms' environmental performance. Second, there is concern regarding the market-restricting effect of the standards and the impact this has had on small- and medium-sized enterprises, especially those located in developing countries. Third, there has been concern over the standard-setting process itself, and the extent to which certain actors, developing-country representatives and non-governmental organizations (NGOs) in particular, were largely excluded from the drafting of the standards, while industrialized countries and corporate actors played a significant role. These problems have led many to question whether the ISO 14000 standards, in effect, are less of an environmental measure and more of a mechanism to enhance the international trade competitiveness of large industrialized-country firms and transnational corporations (TNCs).

Development of the ISO 14000 Environmental Management Standards

Since its establishment in 1946, the ISO has set international technical standards for industry. In setting such standards at the global level, the ISO aims to help foster international trade and the transfer of technology by reducing or eliminating incompatibility of standards between states. The members of the ISO are the national standards bodies of some 138 countries. Standards setting bodies in industrialized countries tend to be private organizations, while in developing countries they tend to be public bodies attached to the government. Various technical committees and subcommittees drawn from the ISO membership develop standards for the international organization, though these committees may also include some representation from industry, research institutes, government authorities, and consumer bodies.[3]

ISO standards are set through a process that involves six stages. First is the proposal stage, where the need for a new standard is confirmed. Second is the preparatory stage, where the technical committee or subcommittee prepares a working draft of the standard. Third is the com-

mittee stage, where the draft standard is distributed for comments among the member bodies of the committee. Fourth is the enquiry stage, where the draft standard is circulated to all ISO member bodies for comment and voting over a period of five months. Fifth is the approval stage, where all ISO member bodies receive the final draft international standard and vote on it over a period of two months. And sixth is the publication stage, where, once the draft has been approved, it is published as an International Standard. Standards are reviewed for confirmation, revision, or withdrawal at least once every five years.[4]

The ISO's launch into environmental standards began in the early 1990s, during preparations for the UNCED conference. The ISO had established a Strategic Advisory Group on the Environment (SAGE) in response to requests for information on how it was responding to global environmental issues.[5] The work of SAGE was different from traditional ISO standard setting, however, in that it focused on setting international-level standards for environmental management systems (EMS) rather than on technical performance standards with respect to the environment. This followed from the ISO's successful experimentation with its 9000 series of quality management standards in the 1980s. An EMS standard was seen to be preferable to one based on environmental performance or technical specifications for pollution control because it was seen to be more flexible to situations in different countries, and would be less likely to act as a barrier to trade.[6] The ISO also sought to develop an international EMS standard because it feared that the proliferation of national EMS standards, which were different for each country or region, could act as a barrier to international trade.

Negotiations on the ISO 14000 standards had begun by early 1993, overseen by the ISO technical committee 207 (TC 207). By 1996, when the first of the ISO 14000 series standards were published, the standards organizations from some 50 countries were participating actively in this committee, which also had some 17 observer members.[7] Industry groups, government representatives, international organizations, and some environmental NGOs were also involved, in varying degrees, in the negotiations.

The ISO 14000 series covers EMS standards in six separate areas—environmental management systems, environmental auditing, environmental labelling, environmental performance evaluation, life-cycle assessment, and terms and definitions.[8] Most of these standards are guidance documents for firms. One of the first standards to be adopted, and the only standard to which firms can become certified, is the ISO 14001 EMS standard.[9] For this reason, this analysis will focus primarily on the ISO 14001 standard. This was published in 1996, and is thus due for a review by the year 2001. To gain certification to this standard, firms must adhere to certain rules. A firm can choose to certify all of its operations or only specific operations or facilities. The main criteria for gaining certification to ISO 14001 can be categorized roughly as follows:[10]

- each facility must develop its own environmental policy statement which indicates that it is committed to comply with all applicable environmental laws in the jurisdiction in which it is located; it must also be committed to continual improvement and the prevention of pollution;[11]
- the facility must adopt an EMS that ensures that it stays in conformity with its own environmental policy statement. Suppliers and contractors are to be encouraged to establish their own EMS that conforms to the ISO 14001 standard;
- the facility must be audited to ensure that the management system is indeed implemented; firms can self-declare their conformity with the standard, or they can opt to obtain certification to the standard from an accredited organization;
- the environmental policy statement and the certification document awarded to firms that meet these criteria must be made available to the public upon request.

Auditors are to be accredited by national standards-setting bodies. Firms which have obtained certification from an accredited auditor are to be reinspected on a regular basis to ensure that the criteria for certification are still being met; certificates are to last for a limited period, generally three years, at which time a full reaudit is required. Policies on reinspection and reaudits are set by national standards-setting bodies, and are still being developed.[12]

Promises and Pitfalls of ISO 14001: Improving Environmental Performance?

The main idea behind ISO 14001 is that firms which adopt it will be forced at all steps of their management to take environmental considerations into account. By developing an environmental policy, firms are required to think seriously about the environmental impact of their operations. The environmental policy should spell out clearly that the firm is commited to comply with all applicable environmental laws in the jurisdiction within which it is located. This, in theory, should ensure that firms are aware of local environmental laws and regulations, and will abide by them regardless of the quality of enforcement in that jurisdiction. The commitment to continual improvement in environmental matters and the prevention of pollution

should also, in theory, get firms moving towards the adoption of better technologies which avoid environmental problems in the first place, rather than focusing on cleaning up after the fact.

The ISO 14001 standard thus seeks to make sure that all levels of management are aware of these commitments and that they stick to them. An audit of the firm's environmental policy document and management practices, which is required for it to become certified to the standard, should provide an objective analysis as to whether the firm in question has indeed met these criteria. In requesting firms also to encourage suppliers to follow the standard, good environmental management practices should spread. The availability of the certification document to those requesting to see it should provide assurance that the entire process is legitimate and above board.

While these are reasonable expectations from the standard, concerns have been expressed regarding the capacity of the standards actually to improve environmental performance and to promote the adoption of cleaner production methods, even if environmental management practices are improved. The ISO 14001 standard has been criticized on several fronts regarding this issue, as outlined below.[13]

The Standards Provide Little Incentive for Firms to Adopt Cleaner Production Practices

The ISO 14001 standard focuses on management practices, as opposed to specific performance requirements, and for this reason it does not call upon firms to set targets for pollution emissions or to report emissions levels. The strongest precondition with respect to environmental performance is that certified firms must have a commitment to comply with environmental laws in the jurisdiction within which they operate. This requirement may not lead to much improvement in environmental performance or to the adoption of clean production practices, as firms should in theory already be complying with such laws.

Although the 14001 standard asks firms to commit to 'continual improvement' and 'prevention of pollution', these concepts are seen by many to be vague, rather than concrete and measurable goals. In particular, some critics of the standards argue that 'prevention of pollution' as defined by ISO includes 'end of the pipe' measures, whereas 'pollution prevention' is generally seen to be a much stronger concept.[14] With a lack of firm specifications and of reporting on emissions levels, the standard does not provide much incentive for firms to reduce these. The reporting of emissions levels, and publication of those levels in public registers, can be a powerful incentive for firms to clean up their acts.[15]

There was in fact debate at the drafting stage as to whether the 14001 standard should require firms to adopt the best available technologies in order to gain certification, a suggestion made by European participants. In the end this was not incorporated, and the draft standard only encouraged firms to consider implementing the best available technology where it was 'appropriate and economically viable'.[16] Joe Cascio, a leading proponent of the standards and lead negotiator for the US delegation, noted that such a requirement would render the standard more performance based, which would make it more difficult for firms in developing countries to meet.[17] It is not clear, however, that developing countries were the main opponents of the requirement of best available technology, since there were so few developing countries participating, as discussed below. The USA, in fact, was very much opposed to the idea because it was worried about its legal implications.[18]

Regulatory Frameworks at the National and International Levels may be Weakened

There is also some concern that the ISO 14000 standards will not strengthen and may in fact weaken regulatory frameworks at the national and international levels. There are a number of reasons for this concern. Perhaps, most importantly, because firms set their own environmental goals in their environmental policy statement, and are judged only against their own goals, there is little incentive for firms to go beyond the minimum requirement of meeting existing environmental laws in the jurisdiction in which they are operating. For TNCs operating in developing countries, there is no extra requirement that they apply the same standards in all operations regardless of their location, as is suggested as a standard practice for TNCs in Agenda 21. By allowing for differences in standards between countries based on local environmental laws, the ISO 14001 standard will most likely only ensure that differences in standards between different countries will remain.

There is also concern that government environmental standards and regulations in general may be weakened in both developed and developing countries as a result of firms' adherence to the ISO 14000 series. This is because the standards are based on firms' self-set goals and their strictly voluntary nature. There may in fact be reason to suspect that the existing regulatory framework at the national level may be watered down if the ISO 14000 standards become widely used by firms. This may be the case especially in developing countries. Joseph Cascio, for example, has argued that the standards may lead some countries to discover that, given their resources, they have more laws on their books than they can ever enforce. He sees this as providing the impetus for some developing country governments to redraft their environmental laws and

regulations so that they can meet existing resources and capabilities.[19]

A further reason why regulatory weakening may occur is the fact that industries in a number of countries are pressing their governments for some form of regulatory relief, such as less stringent monitoring of environmental regulations, for firms which are certified to the ISO 14001 standard.[20] Governments in North and South alike, including those in the USA, Argentina, South Korea, and Mexico, are responding with a variety of measures which take ISO 14001 certification into account in the monitoring and enforcement of regulations.[21] While these developments may make it easier for firms to comply with legal requirements in the country in which they operate, it could serve to weaken the existing regulatory framework in those countries if they cease to monitor and enforce regulations for companies which are ISO-14001 certified.

Countries' environmental regulatory frameworks may also be weakened as a result of the ISO 14000 standards because of the legitimacy given to them by the World Trade Organization (WTO). The Technical Barriers to Trade Agreement adopted in the GATT Uruguay Round stipulates that international standards which are either in existence or 'imminent' are to be favoured by WTO members over standards set by UN intergovernmental bodies and national governments. This is because these latter types of standard are considered to be 'technical regulations' by the WTO and thus are seen as potential barriers to trade.[22] The ISO 14000 standards were 'imminent' when the Uruguay Round was completed, and as a result they are recognized as legitimate by the WTO as international environmental management standards for trade purposes. This means that national or intergovernmental environmental management standards that are more stringent than the ISO 14000 standards could be challenged by other countries as unfair trade barriers under the WTO,[23] and in effect makes the ISO 14000 standards a ceiling for international EMS standards rather than a floor.

A further problem that some critics have pointed out is that the ISO 14000 series make no mention of existing international environmental treaties as being a concern for firms.[24] This failure goes against the spirit of Agenda 21, which stressed their importance.

ISO 14000 as a Tool for Restricting Competition from Developing Countries?

Although the ISO 14000 series standards are strictly voluntary and were established with a view to reducing non-tariff trade barriers posed by multiple sets of national EMS standards, there is growing concern that they will themselves act to restrict market access for small- and medium-sized firms in developing countries. This is because it appears as though certification to the standards is becoming a *de facto* condition for firms which trade on international markets, particularly in certain regions and sectors. The ISO 14001 standard is seen by many to be more of a green 'passport to international trade' than an environmental code of conduct.[25] This poses a problem because the cost of certification is in relative terms very high for small- and medium-sized enterprises and for those firms located in developing countries; indeed, a great number of firms in developing countries are small- and medium-sized. At the same time the cost of not certifying is also large for these firms, because this could potentially restrict their access to international markets. The costs are explained in more detail below.

A major part of the cost of ISO 14001 certification is the fee charged by the auditor for consultation for developing an environmental management system (EMS) and for the first-time audit. There are also fees for periodic audits to ensure that the firm maintains conformity to the EMS and other capital costs that are necessary for the firm to conform to its EMS. These can vary widely, depending on the size and type of firm and on rates charged by consultants for their services. Estimates for certification fees alone in industrialized countries range from $US100,000 to $US1 million for large firms, to $US10,000 to $US50,000 for small- and medium-sized enterprises.[26] These costs for firms in developing countries may be significantly less if local auditing and certifying services are in place. If local auditing services do not exist, firms can obtain certification through an accredited international firm. The cost of hiring an international certification agency, however, is widely seen to be prohibitive for small- and medium-sized enterprises in developing countries. In Mexico, for example, it was estimated that the cost of using an international certifying agency is ten times that for using a locally based agency.[27] For this reason some developing country governments have offered assistance to firms seeking certification in order partially to offset these costs, though this has occurred mainly in newly industrializing countries rather than in poorer countries.[28]

Because of the high fees charged for auditing and certification by international firms, there is incentive for developing countries to establish a local certification industry. But this has its own costs. Because most of the standards-setting bodies in the developing world, where they exist, are government-based as opposed to private institutions, the cost of establishing such an industry is one that governments will have to be responsible for. This is because it must establish an accreditation body that can certify the auditing firms. Moreover, there is no guarantee that firms in developing countries certified by local auditors will gain the same recognition in international markets as they would if certified with internationally recognized auditors.

This is because there is no system for mutual recognition of certification services in different countries. This means that firms in industrialized countries, for example, can still require that certification of their suppliers be granted by internationally recognized certifiers.[29]

Although the costs of obtaining certification to the ISO 14001 standard may be prohibitive for some firms, the costs of not certifying may be less attractive, especially for those firms wishing to compete in international markets. Some TNCs are beginning to require that their suppliers be certified to the standard.[30] This is the case especially in Asia, and particularly in the electronics and automobile sectors. Some governments are also considering requiring ISO 14001 certification for companies that tender for public supply contracts.[31] The effect of these measures is to restrict market access to firms that are not certified. This prospect is worrying for many small- and medium-sized firms in newly industrializing developing countries that are seeking to expand their export markets by supplying firms in industrialized countries with parts and products. It appears as though the widespread adherence to the standards creates a situation where it increases market security for large firms in industrialized countries and TNCs, mainly because they are the only firms that can easily afford to obtain certification to the standards.

Unequal Participation in Setting the Standards

A third major area of concern regarding the ISO 14000 standards is that of participation in the drafting process. The nature of the standards, and their growing acceptance by governments and intergovernmental bodies, takes the ISO into the realm of public policy. But the participation processes of the ISO have not changed to take this into account. Developing-country governments and environmental NGOs in particular were largely absent from the standard-setting process, while representatives from industrialized countries and TNCs dominated the process. This has sparked criticism of the ISO's standard setting procedures for being dominated by the agenda of industrialized countries and private corporations. Because of the public significance that the standards have acquired, many have called for a more open and participatory process.[32]

Part of the reason why developing countries' standard-setting bodies were underrepresented in the drafting of the ISO 14000 standards is that these countries generally have a much lower representation in the ISO to begin with. This is mainly because the costs of attending ISO meetings are borne by individual participants. These costs can be significant, especially when one considers that there are a large number of meetings held every year for each technical committee, and these are held in locations around the world. The result has been a very low turnout from representatives from developing countries in TC 207. In Oslo in June 1995, for example, when the ISO 14001 and 14004 standards were voted on and approved as draft international standards, only six developing countries had actively participated in the process up to that time. At this meeting, 92 percent of industrialized countries were present and voted on the standards, while only 16 percent of developing countries were present and voted.[33] The size of the delegations of those developing countries that did participate was much smaller than those from standard-setting bodies from industrialized countries. This made participation in the 25 working groups and subcommittees of TC 207 particularly difficult for developing-country delegations. Although the ISO has a programme to assist developing-country representatives, it does not have adequate funding to provide the full participation of all those desiring such assistance.[34]

There were also very few NGOs involved in drafting the standards. Organizations can apply to be a liaison member of the ISO, which entitles them to receive materials and participate but not to vote in discussions in the standards-setting process. But NGOs, like developing countries, face the constraint posed by the fact that participants must meet their own costs of attendance at meetings, and as a result there are few NGOs in this category. Of the 22 liaison members that were involved in drafting the ISO 14001 standard, only eight were environmental NGOs, while the rest were industry groups and international organizations.[35] NGOs may be invited to be participants on the delegations of national standards-setting bodies that participate in standard setting, but in practice few NGOs have been invited to take this role. The World Wide Fund for Nature has criticized the ISO for the lack of NGO representation in the drafting of the ISO 14000 standards. It also complained that the organization suffers from a serious lack of transparency, citing the ISO's adoption in June 1996 of a policy that effectively banned media access to its meetings.[36]

While representation of developing countries and NGOs was very low in the drafting of the ISO 14000 standards, industry groups and environmental consultants had a much higher representation in the activities of TC 207.[37] The USA, for example, sent some 400 representatives from industry, but only about 20 representatives from government and public interest groups.[38] TC 207 was also made up mainly of executives from large TNCs, standards-setting bodies, and consulting firms. The chairs of the subcommittees and working groups of TC 207 all came from industrialized countries, and half of the working-group chairs were employees of major TNCs.[39]

The result of the low participation on the part of developing-country representatives and environmental NGOs is that the ISO 14000 standards focus mainly on the con-

cerns of firms in industrialized countries. If more representatives from developing countries and environmental NGOs had been present in the initial drafting stages, they likely would have pressed for the inclusion of measures such as phase-in periods and economic assistance for developing countries, as well as technology transfer and more equal representation. It is also likely that environmental NGOs would have pressed for more performance-based indicators in the standards.

Future Prospects and Areas for Reform

The ISO has clearly moved into the public policy arena by setting a management standard for environmental improvement, as opposed to one based on the type of technical standards that it has traditionally set. The public policy significance of the ISO 14000 standards is amplified by their widespread adoption among firms, which only increases the chances of their becoming a *de facto* business condition for international trade. Moreover, their recognition by governments and intergovernmental bodies such as the WTO as legitimate standards for public policy purposes gives them legal weight at the national and international levels. Because the standards have gained significance for public policy, it is important to evaluate them on these grounds, rather than as strictly voluntary firm-level standards.

Adherence by firms to the ISO 14001 EMS standard can make an important contribution to the greening of industry. Ensuring that managements consider environmental implications of each aspect of their activities is an important first step towards corporate greening, and firms which certify to the standard are committing to this principle. But at the same time it is important to be aware of the limitations of the ISO 14001 standard in terms of environmental performance, market access, and participation in standard setting. Each of these has been identified by critics of the standards as problematic, not just for environmental quality, but also for democratic international environmental governance. Whether these problems can be overcome within the context of the existing standards remains to be seen. It is too early to assess whether the standards have in practice improved firms' environmental performance, though some claim that ISO-certified firms are changing their mentalities with respect to the environment.[40] Others stress its potential to bring such change but also highlight its pitfalls.[41]

Because the standards are due to be considered for revision by 2001, there is some scope for remedying the problems identified by critics. Reforms might be considered in the following areas. First, there could be more attention paid to the problems and constraints faced by small- and medium-sized enterprises, particularly those based in developing countries. The ISO has already identified this issue as one which deserves special attention, and it is likely that this is on the agenda for the review of the standard.[42] The ISO would also benefit from a consideration of the process for participation in standard setting. Although, in the case of the ISO 14000 standards, the initial agenda setting was dominated by industry players and industrialized-country governments, future standard setting which has public policy significance could incorporate more active participation of developing countries and NGOs. Where cost factors prevent these actors from full participation, there could be more assistance provided. The low level of participation of developing countries in particular is recognized by the ISO as a point of concern.

In addition to attempting to increase participation in terms of adopting and setting standards, there are other more substantive issues that the ISO review of the 14001 standard could consider. These include some of the concerns of developing countries, such as the incorporation of a phase-in period. This would reduce the pressures on developing-country firms to adopt the standard immediately in order to avoid trade discrimination. It would also likely contribute to a more meaningful consideration of the standards as environmental measures, rather than purely as a trade 'passport'. There might also be consideration of the suggestion that TNCs requiring ISO certification of their suppliers provide economic assistance and/or technology transfer to enable them to adopt the standards in a less costly fashion.[43] Each of these measures might help improve the effectiveness of the ISO 14000 standards, and could reduce the market-restricting impact that they have on small- and medium-sized enterprises, particularly those in developing countries. But it is unclear the extent to which the ISO membership is committed to addressing these weaknesses of the standards in its review.

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