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*ENVIRONMENTAL MANAGEMENT SYSTEMS AND ECO-LABELLING: POTENTIAL ADVERSE EFFECTS ON THE TRADE OF DEVELOPING COUNTRIES**

Prepared by

the UNIDO Secretariat

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I. INTRODUCTION

In connection with its task of assisting developing countries to achieve sustainable development, UNIDO is concerned about the on-going efforts of industrialized countries to promote eco-labelling, environmental management systems and environmental auditing. These efforts may inadvertently reduce the export competitiveness and market access of developing countries until a greater understanding is reached.

The sheer number and diversity of these various aspects of eco-labelling is overwhelming. The numerous national initiatives, primarily government sponsored, began when the German government introduced the "Blue Angel" eco-label in 1978. It now covers more than 3,500 products in almost 80 categories. Canada was the second country to initiate an eco-labelling scheme, "Environmental Choice Program," in 1988, and Japan launched its scheme, "Eco Mark", in 1989. There are now approximately twenty national eco-labelling schemes worldwide including those in several developing countries, such as the Republic of Korea ("Ecomark"), India ("Ecomark"), Brazil ("Green Seal") and Singapore ("Green Label"). The European Union (EU) has developed an eco-labelling scheme that is intended to replace the national labelling programmes of member States, and it is now being implemented.

National environmental auditing schemes also emerged at the same time frame, but were much more the initiative of industry than government. They started in the United States with the development of environmental auditing in the 1970s as part of the activities of the Securities and Exchange Commission. In the 1980s industry groups and associations, such as the Canadian Chemical Manufactures Association, took the initiative to promote environmental auditing. The International Chamber of Commerce issued its initial guidelines on environmental auditing in 1989. A major impetuous in this area was the 1990 European Commission proposal for a directive outlining for guidelines on eco-auditing. In preparing its guidelines, the EU formally introduced the concept of environmental management systems. Its Eco-Management and Audit Sch_.ne (EMAS), a regulation, was adopted in 1993 and became effective in April 1995. Parallel with this effort, the British Standards Institution prepared a standard, BS 7750, which was issued in 1992, field tested and then reissued in 1994. The EU Regulation also spurred France,

Ireland and Spain to issue their own national standards in 1993. During the same time period, Australia, New Zealand and South Africa also published their national standards.

The growing diversity of activities related to environmental management and the need for wider government involvement, as well as the success of the ISO 9000 Series on Quality Management Systems, also encouraged the International Standards Organization (ISO) to enter the field of environmental management. In 1991, ISO and the International Electrotechnical Commission (IEC) created the Strategic Advisory Group on the Environment (SAGE), a panel of experts from member countries. SAGE considered whether international management standards would achieve the following:

* Promote an approach to environmental management similar to the approach for quality management.
* Enhance an organization's ability to improve its environmental performance and to measure the improvement.
* Facilitate trade and the removal of trade barriers.

The Technical Management Board of ISO followed SAGE's recommendation and created Technical Committee 207 (TC 207) in 1993 to develop international environmental management standards (ISO 14000 series).

Chapter II of this paper starts by describing potential trade barriers and the environmental shortcomings of unilateral eco-labelling schemes. It then summarizes the proposed standard for eco-labelling (TC 207/CD 14020) and describes the extent to which the proposed standard addresses those concerns.

Chapter III starts with a brief overview of the proposed standards for environmental management systems (TC 207/CD 14000 and 14001) and environmental auditing (TC 207/CD 14010, 14011 AND 14012), followed by a short description of the possible effects that EMAS might have for the TC 207 standards. Next, it describes potential trade barriers for developing countries associated with the proposed standards.

Chapter IV proposes some options that would respond to developing countries' concerns. Chapter V is a brief concluding section.

II. ECO-LABELLING

A. Definition

Eco-labelling means the voluntary use of labels to inform consumers that a product has been determined to be environmentally more friendly than other products of the same category. Since no absolutely ecologically sound products exist and every product has some negative impact during its lifetime, all eco-labelling systems are relative in the sense that they draw attention to products that are less harmful than similar products. Eco-labelling aims at influencing both consumer behaviour and the product's design in favour of these environment-friendly products and technologies. In markets where consumers prefer environment-friendly (green) products, eco-labels serve as a marketing tool.

Before a proper eco-labelling system can be established, a number of steps have to be taken:

*   The product group to be labelled must be designated in such a way that it is clear which products belong to the group and which do not. The products should be competitive and basically fulfil the same purpose.

*   A set of criteria must be chosen on the basis of which a license can b awarded to use the eco-label. These criteria must be defined so that they are measurable by standardized methods. There must also be an assessment of the ecological impact of the product during its life-cycle, including resource extraction, production, distribution, use, consumption and disposal. Such an assessment reflects an approach known as the cradle-to-grave approach.

*   Reasonable limits (thresholds) for the selected criteria must be set. The setting of the limits is basically a political question. It is often handled in such a way that about 20 per cent of the products within a product group will merit the eco-label.

* It has also been proposed to establish a scoring or grading system to sum up the assessment of the product. This would entail weighting the various criteria.

* Methods of certification and verification (self-declaration or third-party declaration, for example) should be decided on.

B. Potential trade barriers associated with unilateral eco-labelling schemes

1. Scarcity of information

Because there is such a great variety of eco-labelling schemes it may be hard to obtain information on the requirements of any given scheme. Without information on which country has developed or is going to develop such a scheme, foreign producers are unable to participate in that development or to voice their concerns. Even if the foreign producers are given the information it is often neither timely nor accurate, and they are likely, particularly those from developing countries, to remain behind in adjusting to the new requirements. The lack of (timely) information may be aggravated by rapid changes in the requirements of overseas eco-labelling schemes. Uncertainty about the contents of the requirements and their period of validity may cause delays in investment decisions aimed at adjusting to those requirements.

The access to and demand for information depends furthermore on factors such as (a) the firm size, (b) the relationship with buyers/importers and (c) the size of the importing market.

2. Lack of technology

The criteria, in particular process-related ones, and thresholds may be so restrictive that a specific cleaner technology or production process is called for. Manufacturers from developing countries may not yet use these cleaner technologies, and installing them may force existing facilities to be scrapped.

Cleaner technologies are not, for the most part, readily available in developing countries, and purchasing them usually involves high costs. However, while larger firms may have the necessary funds and better access to such technology than small and medium-size enterprises (SMEs), generally all firms face the same problem, namely, what is meant by "cleaner" technology . The definition may differ from country to country: it may simply depend on what technology is available in the importing country or it may be based on regulations there.

3. Lack of infrastructure (certification/accreditation)

Measurements to assess whether the requirements of an eco-labelling scheme are being met are another concern for developing countries. Hardly any developing countries have their own capacity to assess conformity with the requirements of eco-labelling schemes in other countries. There are several reasons for this. First, most developing countries simply can not afford to establish such a capacity. Secondly, they do not have the technical staff or the knowledge and skills to conduct such assessments. Thirdly, there are few, if any, testing laboratories. And lastly, certificates granted by domestic certification bodies may not be credible in the eyes of importers and consumers in the targeted market. The problem becomes even worse when it is remembered that the certification bodies would have to certify against the requirements of more than 20 different eco-labelling schemes.

The fact that eco-labelling schemes are more and more being based on process-related criteria makes conformity assessment even more complicated. These criteria require proof of compliance in all production phases, even those that take place outside the control of the firm that makes the final product.

Because developing countries may lack both infrastructure and credibility, most foreign eco-labelling schemes will insist on on-site inspections by authorities appointed by them or on certification by an internationally recognized certification body. The French eco-labelling scheme, for example, insists that an on-site inspection should be conducted by a certified official of the standard-setting authority AFNOR. The Oeko-Tex

standards for textiles[1] require certification by institutes belonging to the International Association for Research and Testing in the Field of Textile Ecology. The applicant has to provide one of these institutes with samples of the product to be labelled and, furthermore, has to explain to the institute the measures taken to ensure that all the products manufactured and/or sold are of the same quality.

4. Costs of adjustment

The development, implementation and operation of an eco-labelling scheme may entail high costs for companies that do any of the following to meet the requirements of eco-labels:

* Purchase specific chemicals and other inputs: Certain criteria require specific inputs, leading to additional costs, and they may even have to be purchased abroad.[2] Suppliers of input materials may use different production and process methods (PPMs) than required for the final product. The manufacturer then has the choice to change to another specialized supplier or to try to influence the PPMs of his present supplier. Either way this will cause additional costs. While large firms may be able to bear them, this will normally be very difficult for SMEs from developing countries.

* Procure new technologies: The increasing use of process-related criteria might require the use of specific technologies that are difficult to get or are expensive. In other cases, it might only require modernization of the equipment, but at a minimum that would be disruptive of production processes.

* Conduct research studies: The use of process-related criteria calls for an extensive, and therefore costly, life cycle analysis of the products manufactured.

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[1] Oeko-tex is a normative document published by the International Association for Research and Testing in the Field of Textile Ecology.

[2] The requirement to use specific raw materials or chemicals may in some cases be justifiable, taking into account aspects of human health and safety.

* **Assess conformity:** Conformity assessment becomes more complicated and expensive if all phases of the production process must be assessed, including those that take place outside the control of the company manufacturing the final product.

* **Train personnel and, if necessary restructure the organization:** At a minimum, the criteria would probably require additional training of the work force to meet the new product specifications. They might even require revamping the organizational structure to ensure that product specifications are met. In addition, if there are PPM-related criteria, many additional personnel would need training.

The costs of compliance measurements become even more onerous if an applicant has to comply with the requirements of many different eco-labelling schemes. Furthermore, the cost of measures aimed at environmental protection may increase when environment costs (social costs) are more fully internalized. To some extent, however, such measurements may also result in cost savings, which may offset some of the compliance costs.

Developing countries often find it difficult to bear the costs of compliance not only because they lack the necessary funds but also because existing funds compete for other, more urgent environmental and social problems. If, for instance, a company in a developing country facing water pollution problems is required by an importer to take measures protect air quality in order to obtain the label, it may not be able to meet this requirement because domestic environmental regulations mandate water protection, which absorbs all the company's financial resources.

5. Selection of product categories and criteria

Domestic producers can more easily influence the selection of new product categories to be gra... ad a label than can foreign producers, thus excluding products that are of export interest to foreign producers. In Germany and Canada, for example, more than 70 per cent of the proposals for new product categories are made by domestic industry. Foreign producers are concerned about losing market access because their formerly competitive products would not be able to obtain an eco-label. This situation arises

mainly because developing countries producers do not participate in the
selection of product categories or because they have no funds for research on
product categories suitable for labelling.

The same problem occurs in determining the criteria for awarding an eco-
label. Because domestic producers have a greater input, the criteria may be
particularly problematic for foreign exporters. They may focus on
environmental attributes that can be met more easily by domestic firms because
they are already part of the domestic regulatory scheme. Certain criteria may
require the use of an input (for example, a dyestuff) that is not available
in the developing country. Alternatively, more emphasis on recycling might
force developing country producers to use materials that can be recycled in
the importing country even though these materials are less environment-
friendly than the materials traditionally used in the producing country. In
the end, the determination of criteria and thresholds may be so narrow as to
focus mainly on the economic and environmental concerns of the importing
country, not taking into account the environment-friendly inputs and/or PPMs
available in developing countries. Any environmental achievements by
manufacturers in developing countries that are not addressed by the criteria
of a particular eco-labelling scheme will be overlooked.

These concerns become even more serious when it is considered that many
criteria and their thresholds are not objective or have no scientific basis.[3]
It is difficult to compare the different environmental impacts addressed in
the eco-criteria. For example, on which basis should one decide which of two
products is more environment-friendly. One product is produced by an energy-
intensive process but causes low emissions. The other is produced with little
input of energy but causes high emissions. Since there is no agreement on how
to weigh different environmental impacts nor is there a procedure for
evaluating the net or total environmental impact of a product, the
determination of eco-criteria and their levels inevitably involves value
judgements.

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[3] The inadequacy of scientific data makes it difficult for the
institutions to select appropriate criteria for granting the eco-label or to
set thresholds for those criteria.It will lead to poor decisions based on
judgements that lack objectivity and may severely affect international
trade.

C. Environmental shortcomings

Although eco-labelling schemes aim at protecting the environment and thus contributing to an increase in welfare, several aspects of them may be inefficient from the environmental point of view:

* To assess the social costs of environmental protection and resource depletion associated with the production and consumption of a product, it is necessary to first assess the total environmental impact. As mentioned above, there is still no scientific basis for weighing different environmental impacts or for evaluating the overall environmental impact of a product. Therefore, any measures undertaken on the basis of uncertain scientific data may lead to even greater environmental damage. This does not mean eco-labelling schemes should be abolished but rather that research efforts should be greater.

* The difficulties of developing a comprehensive set of criteria often cause all but the most important environmental impacts in a product's life cycle to be ignored. Criteria are then derived addressing the most important aspects. This will of course involve a large number of value judgements, which are not very objective from the environmental point of view. Environmental efforts in areas not covered by these criteria will simply be disregarded.

* The criteria and thresholds are likely to be based on domestic production patterns and to focus on local economic and environmental conditions and priorities. Environmental conditions, especially assimilative capacities, vary among countries. As a result, process-related criteria set up by the developed country may not reflect the developing country's environmental realities and goals and may therefore be inefficient from the environmental point of view. Foreign producers will have to divert scarce capital resources from projects of greater environmental importance to those of lesser importance, thus leading to a suboptimal allocation of resources.

D. TC 207/CD 14020

TC 207 has defined three types of labelling systems that promote the environmental virtues of a product:

* EL-type I: Third-party certified eco-labelling programme based on several criteria.

* EL-type II: Environmental claims by the manufacturer.

* EL-type III: Quantitative information that has been independently verified using preset indices.

The main objectives of the proposed standards for EL-type I (TC 207/CD 14020) are to promote market driven demand for and supply of products that reduce stress on the environment, to avoid compromising product safety or significantly affecting product function and to provide accurate, verifiable and relevant information to the consumer.

The standards require adherence to the following principles. First, eco-labelling schemes must be voluntary. Secondly, to make them credible, two conditions must be met: (a) Transparency (sound scientific methods, repeatable and reproducible, for developing the criteria; consultation with interested groups); (b) Third-party certification. Thirdly, the products have to comply with the environmental regulations of the country where they are manufactured and the country where they are being marketed. Fourthly, eco-labelling schemes should take a cradle-to-grave approach to avoid the transfer of environmental stress across media. Lastly, they should not discriminate in their treatment of domestic and foreign goods.

E. Effects of TC 207/CD 14020

The proposed standards will lessen or even eliminate some of the concerns mentioned above:

* The lack of information can be remedied by providing more transparency and communicating information on criteria, certification and award procedures to interested parties. Transparency involves allowing the interested parties to participate in developing criteria and certification proceaures as well as notifying both domestic and foreign producers at an early stage about the product categories and criteria.

* Problems related to certification/accreditation and credibility can be largely solved by the provisions of the proposed standard. The proposed standard provides guidance on certification procedures. It contains the various procedures for assessing conformity that prevail in different countries as a result of different circumstances, e.g. legal frameworks. To make an eco-label more credible, the standard calls for third-party certification.

* To mitigate some of the problems arising from the selection of eco-criteria, the proposed standard suggests that the criteria should be objective, comprehensive, transparent and relevant, taking into account the use of natural resources as well as environmental burdens across all media. They should be periodically reviewed in the light of new technologies, new products on the market etc. and should be based on proven technical and scientific assessment.

* Addressing the potential environmental shortcomings of eco-labelling schemes the proposed standard calls for the following: First, in order to achieve a real reduction of stresses on the environment and not to merely transfer stress across media or the life cycle stages of a product, eco-labelling schemes should be based on a comprehensive, cradle-to-grave approach to setting criteria. Secondly, the requirements

for compliance with environmental process-related regulations at the producing site must be flexible and take into account, where possible, the producing country's own environmental requirements.

Although this general guideline will help to harmonize the various unilateral eco-labelling schemes and will therefore make compliance with the requirements for obtaining the eco-label easier, it will not abolish all problems and concerns. The problem of inadequate or non-existent infrastructure and technical capabilities for certification will remain. Nor can the standards solve the problem of appropriate technology. The costs of adjustment will probably be somewhat lessened by harmonization but will remain a considerable obstacle for most producers in developing countries. In setting up eco-criteria, scientific evidence will often be lacking because of the dearth of research institutes or knowledge and skills.

III. ENVIRONMENTAL MANAGEMENT SYSTEMS AND ENVIRONMENTAL AUDITING

A. Definition

In this context, environmental management systems are understood as the organizational structure, responsibilities, practices, processes and resources for implementing and maintaining environmental management. The latter comprises those aspects of the overall management function of an organization that develop, achieve, implement and maintain its environmental policy and objectives. Environmental management systems should enable organizations to achieve and demonstrate sound environmental performance by controlling the environmental impact of their activities, products and services, taking into account self-determined environmental policy and objectives. It also enables an organization to anticipate and meet growing environmental performance expectations, to ensure ongoing compliance with national and/or international requirements and to continually improve its environmental performance.

Environmental auditing is a systematic, documented process by which evidence is obtained and evaluated to determine whether an environmental activity, event, condition, management system or information about these matters conforms with audit criteria, with the results being communicated. EA

aims at verifying and improving environmental performance by ascertaining conformity, proper implementation and maintenance of an environmental management system and identifying areas of potential improvement within the system.

B. TC 207 working documents

1. TC 207/CD 14000 and TC 207/CD 14001: Environmental management systems

The general purpose of TC 207/CD 14000 is to assist organizations that are implementing or improving an environmental management system. It gives them a methodology for doing so. TC 207/CD 14001 specifies the core elements of such a system. It contains those system elements that may be objectively audited for certification/registration purposes and for self-declaration[4] purposes. While it does not specify environmental performance criteria, it does require an organization to formulate a policy and objectives taking into account legislative requirements and information about significant impacts.

To be effective, an environmental management system should have a number of core elements:

* Environmental policy: Statement of the organization's intentions and principles in relation to environmental performance.

* Planning: Includes the identification of environmental aspects and legal requirements as well as the setting of objectives and an environmental management programme.

* Implementation: Structures, responsibilities, training, awareness, communication, documentation, control and emergency preparedness.

* Regular checking and corrective actions: Includes monitoring, measuring and auditing.

* Management review: Check on the continuing suitability, adequacy and effectiveness of the system in the light of its objectives and changing circumstances.

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[4] Self-declaration refers to a unilateral statement by a manufacturer that it has an environmental management system in place.

2. TC 207/CD 14010, TC 207/CD 14011 and TC 207/CD 14012:
Environmental auditing

The general purpose of TC 207/CD 14010 is to provide organizations and their clients with the general principles of environmental audits. Some of the main principles are:

*   Environmental auditing should be based on defined objectives.

*   The environmental auditing process, its findings and conclusions should be objective.

*   Environmental auditing should be performed in a systematic manner.

*   Environmental auditing criteria should be determined.

*   Collection, analyses, interpretation and documentation of appropriate information to be used as evidence in the auditing process.

TC 207/CD 14011 provides procedures for the conduct of environmental management system audits. Steps to be taken for planning and performing an audit are: (a) initiating the audit, (b) preparing the audit, (c) executing the audit and (d) Audit report and records.

TC 207/CD 14012 addresses the qualification criteria for internal auditors. These criteria cover education and work experience, training, personal attributes and skills, maintenance of competence, language.

C. Effects of EMAS on TC 207 Working documents

The Eco-Management and Audit Scheme (EMAS) of the EU was adopted in July 1993 and opened to company participation on 10 April 1995. It is a market-based initiative and, like TC 207/CD 14001, a voluntary option for companies.

The principle objective of EMAS is to improve a site's environmental performance and to provide environmental performance data to the marketplace so that better performance becomes a market factor. EMAS requires companies to establish an environmental policy, including commitments to improve environmental performance, to carry out an environmental review, to develop a site environmental progr me and management system, to deliver that programme, to audit the performance and the system and to provide information to the public in the form of an environmental statement. Before a site can be registered, it is examined by external, accredited, third-party environmental verifiers.

As a regulation, EMAS is binding on the 15 EU member States. They must establish the administrative structures set out in the regulation, which allow companies to participate.

Since an international standard is not automatically binding on the members (i.e., EU and EFTA countries) of the Comite Europeen de Normalization (CEN) when TC 207/CD 14001 is adopted, CEN members may continue to operate their own national standards for environmental management systems. (Currently, France, Spain, Ireland and the United Kingdom have national standards.) The worse-case scenario could, therefore, be a plethora of national standards for environmental management systems running in parallel to an international ISO standard. However, if CEN adopts TC 207/CD 14001, all its members must remove their equivalent national standards.

Some of the main differences between the proposed TC 207/CD 14001 standard and the EMAS-regulation are listed in table 1. First, under TC 207/CD 14001 an organization's environmental performance can be improved only

indirectly, as a result of improving its environmental management system, whereas under EMAS environmental performance improvement is directly focused on. Thus, TC 207/CD 14001 is considerably weaker than EMAS. Secondly, unlike EMAS, TC 207/CD 14001 policy distances top management from any personal commitment to improving environmental performance. This indirect commitment is another reason why the ISO 14001 draft is considered to be weaker. Lastly, TC 207/CD 14001 is more prescriptive about structure and responsibility, training and awareness and document control than EMAS, giving the impression that its management system will be more heavily documented and, possibly, more bureaucratic than that of EMAS. The somewhat negative view many businesses have about ISO 9000, namely that the standard has little to do with good quality and much to do with documentation, could be repeated with TC 207/CD 14001.

D. Potential trade barriers associated with TC 207/CD 14001

TC 207/CD 14001 relates to the certification of organizations. Although it requires the consideration of products, certificates will be granted only to an organization and not to the product itself. Therefore TC 207/CD 14001 will create no obvious barriers to trade as would eco-labelling schemes. However, despite the fact that TC 207/CD 14001 states in its introduction that the standard "should not be used to create non-tariff trade barriers", the potential to create trade barriers does exist within the draft.

Table 1. Differences between TC 207/CD 14001 and EMAS

TC 207/CD 14001	EMAS
A draft standard	An EU legislative instrument, i.e. a regulation
Applies to the international arena	Applies across the whole of the EU
Can apply to the whole organization or part of an organization	Applies to sites only
Applicable to an organization's activities, products and services in any sector	Restricted to site-specific industrial activities
Applicable to non-industrial activities e.g. transport and local government	Non-industrial activities can only be included on an experimental basis
Focuses on organizations implementing environmental management systems; indirect link to environmental improvements emerging from the system	Direct focuses on environmental performance improvements at a site and the provision of information to the public
Review (identification of environmental aspects) suggested in annex 4.2.1 but not a specification of the draft standard	Initial environmental review essential
Environmental policy commitment to continuous improvement of environmental management system and compliance with relevant environmental legislation	Environmental policy commitment to continuous improvement of environmental performance and compliance with relevant environmental legislation
Environmental management audits concerned with the assessment of environmental management systems only	Environmental audit assesses management systems, processes, factual data and environmental performance
Frequency of audits not specified	Maximum audit frequency specified at 3 years
Only the environmental policy must be publicly available	A description of the environmental policy, programme and management system made publicly available in the statement
Public statement not required, consideration must be given to external communication (subclause 4.3.3) but left up to management as to how much information to disclose	Public environmental statement and annual simplified statement including factual data essential
Document is more clearly structured	Confusing arrangement (a lot of cross-references)

D. Potential trade barriers associated with TC 207/CD 14001

TC 207/CD 14001 relates to the certification of organizations. Although it requires the consideration of products, certificates will be granted only to an organization and not to the product itself. Therefore TC 207/CD 14001 will create no obvious barriers to trade as would eco-labelling schemes. However, despite the fact that TC 207/CD 14001 states in its introduction that the standard "should not be used to create non-tariff trade barriers", the potential to create trade barriers does exist within the draft.

1. Environmental Policy

TC 207/CD 14001 requires top management to formulate and adopt an environmental policy that addresses the environmental impacts of the company's activities, products and services. Top management is required to ensure that its policy is "appropriate to the nature, scale and environmental impacts of its activities, products or services" (subclause 4.1.a) and that these impacts are considered when "setting its environmental objectives" (subclause 4.2.1). Thus it would be possible that a company establishes a policy that excludes certain raw materials or sources of raw materials because of their environmental impact. For example, CFC used in production or tropical timber because of its origins.[5]

2. Supplier Performance

The provisions of TC 207/CD 14001 most likely to affect trade are those that require the scheme to consider suppliers. TC 207/CD 14001 requires an organization to establish and maintain a procedure to identify the environmental aspects of goods and services and communicate any relevant procedures to suppliers.

Experience in the United Kingdom with environmental management systems standard BS 7750 illustrates how suppliers to organizations certified to an environmental management systems standard may be affected. Currently, there are 20 organizations certified to BS 7750, and all have to some extent investigated their suppliers. The most common way of satisfying the BS 7750

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[5] A caveat is added that the environmental aspects of an organization's activities, products or services need to be identified only if the organization can be expected to control or have an influence over them.

requirement is to send out a questionnaire asking the supplier about its environmental performance. Questionnaires vary in complexity from the simple to the draconian. In some cases, suppliers need to undertake extensive investigation to answer the questions.

For example, one certified company, Design for Distribution (D2D), has its own accredited vendor programme in which suppliers wishing to become accredited vendors are required to satisfy a set of entry criteria that include environmental criteria. Suppliers are placed in one of four grades depending on their answers to the D2D questionnaire. Suppliers that fail to improve their performance are dropped. D2D has taken the process of "greening" the supplier chain one step further and is now asking its suppliers to question their own suppliers, asking, for example, Are contracts awarded preferentially to environmentally appealing suppliers?

3. Costs of adjustment

The provisions of the proposed TC 207 standards will lead to extensive changes in the structure and operation of an organization. Most of these changes will involve expenditures many companies in developing countries cannot afford. These include costs for:

* Obtaining new technology.
* Conducting training/awareness courses for personnel.
* Monitoring and measuring of activities.
* Auditing the environmental management system.

Many companies in developing countries are not yet capable of providing these resources, leading to improper or late implementation of environmental management systems or none at all.

4. Lack of infrastructure

Hardly any developing countries have their own certification bodies to assess conformity with the requirements of TC 207/CD 14001. This is mainly due to lack of funds and missing know-how. Thus, conformity assessments will most likely be conducted by either certification bodies based in developed countries or by international ones. Furthermore, since most developing countries do not have an accreditation body, certificates granted by a

certification body in a developing country might not be recognized by firms in developed countries.

B. Problems occurring if TC 207/CD 14001 were not introduced

If TC 207/CD 14001 were not introduced there would be several consequences. First, a company would have to comply with the requirements of a separate environmental management system scheme in every country in which it is trading. Secondly, the proliferation of unilateral environmental management system schemes would make obtaining information about them more difficult. Thirdly, adjusting to different environmental management systems schemes would cause additional costs. Fourthly, companies from developing countries might have to be assessed for conformity by certification bodies in each importing country.

IV. POSSIBLE REMEDIES FOR DEVELOPING COUNTRIES' CONCERNS

The following proposals refer mainly to problems associated with eco-labelling but can easily be applied to environmental management system schemes as well.

A. Internationally agreed-upon labels

Consumer preferences for environment-friendly products may create trading opportunities for developing countries. The problem faced by most consumers and producers is the difficulty of defining environment-friendly products. Even though in theory eco-labels should help the consumer decide on purchases, the great number of labels often adds to the confusion instead of reducing it. The creation of a single, internationally agreed on eco-label might help to counter the proliferation of national labels, many of which are misleading. It might also alleviate the trade problems associated with eco-label programmes. To formulate an international label based on uniform criteria, differences in environmental, social and economic conditions have to be considered and the countries that will be most affected by the label need to be consulted. Any deviations from the internationally agreed-on criteria or the use of a separate eco-labelling scheme should be justified.

B. Mutual recognition

A developing county's use of its own eco-label on export goods may have only limited success, mainly because consumers in developed countries have reservations about the quality promised by such a label and will continue to prefer products with a better-known label. The use of an international label might therefore be more successful. However,if neither an international guideline nor an eco-label is established, an alternative might be the mutual recognition of national eco-labelling schemes. The idea here is to recognize the validity of divergent environmental criteria and to ensure that trade interests are not unduly affected by that diversity. Under mutual recognition, if certain requirements are met, the fact that a product qualifies for an eco-label in the exporting country would be the basis for awarding it an eco-label in the importing country.

There are three different types of mutual recognition. An exporter may obtain a label in the importing country, if it complies with one of the following:

* The criteria of the exporting country.
* The PPM-related criteria of the exporting country and the product-related criteria of the importing country ("cradle-to-export-border and import-border-to-grave" approach).
* The criteria of the importing country, with certification being undertaken, however, by the exporting country's eco-labelling programme.

The first form of mutual recognition implies that the eco-criteria set up in the exporting country are equivalent to those set up in the importing country. The second form takes into account environmental conditions in both the producing and importing countries. The third merely entails recognition of the testing and verification bodies of the exporting country by the importing country. One basic requirement of the mutual recognition concept is mutual confidence among eco-labelling scheme authorities.

C. Equivalency

Another approach that would avoid trade discrimination and take into account environmental conditions and priorities in the producing country, in particular a developing country, is the concept of equivalency. When

compatible environmental goals can be achieved in different ways, different criteria can be accepted as a basis for awarding eco-labels. Besides being a basic requirement for mutual recognition of eco-labelling schemes, the concept of equivalency can be used even if the exporting country does not have its own eco-labelling scheme. Environmental regulations in an exporting country may in some cases be accepted as equivalent to meeting eco-criteria/thresholds in the importing country. The concept of equivalency may also be applied to different eco-labelling schemes in the importing and exporting countries. Since the main idea of equivalency is to take into account environmental conditions in each country, it is more easily applied with process-related criteria than with product-related criteria.

D. Transparency/participation

Improving the transparency of eco-labelling schemes may also mitigate any potential adverse trade effects. There are a number of ways to do this:

* Spell out environmental objectives and scientific principles.
* Provide early notification of new schemes, product groups and criteria.
* Solicit comments on draft criteria.
* Publish draft criteria.
* Arrange the participation of all interested parties in determining criteria and thresholds.
* Clarify the labelling process and methodology.
* Set up information centres.
* Carry out information campaigns.
* Use sound, repeatable and reproducible scientific methods when developing criteria.
* Make the rationale and details on which the eco-labelling scheme is based clear and open for examination.

E. Technical assistance

Many developing countries lack the technical know-how to establish their own eco-labelling schemes. Technical assistance in testing and verifying products and plants by developed countries or international organizations could overcome this problem. The fact that such assistance has been rendered may lend credibility to the eco-labels of a developing country. Testing,

certification and verification can also be undertaken by international certification firms. However, if rights are awarded to only a few international certification firms, they may set excessively high prices. Therefore efforts must be made to encourage competition.

F. The provisions of the agreement on Technical Barriers to Trade

The agreement on Technical Barriers to Trade (TBT), a subsidiary agreement to GATT, had been established to provide transparency and notification disciplines on technical regulations, standards and conformity assessment procedures. Following significant revision of the TBT, the definitions for technical regulations and standards now include process and production methods relating to the final characteristics of the product, (previously they had included only the final characteristics of the products).

It seems that to the extent that eco-labelling schemes create standards or technical regulations stipulating product characteristics or PPMs related to those product characteristics, they are subject to the disciplines of TBT. In particular, mandatory eco-labelling schemes follow under articles 2 and 3 of the TBT, while voluntary eco-labelling schemes are covered by article 4 of the TBT and by the Codes of Good Practice for the Preparation, Adoption and Application of Standards.

TBT requires adherence to five principles:

* Non-discrimination against imported products.
* Transparency in the development and implementation of standards.
* Acceptance of equivalent technical standards of other countries.
* Special and differential treatment for developing countries.
* Scientific basis for a standards.

Under TBT, technical standards that have an impact on trade are permitted only to the extent that they are the least trade-restrictive measure necessary to fulfil a legitimate objective. A legitimate objective is defined to include the prevention of deceptive practices and the protection of human health or safety, animal or plant life or health, or the environment. If a technical standard is created to fulfil one of these legitimate objectives and is based on an international standard, it is presumed not to be an unnecessary obstacle to international trade and, therefore, consistent with GATT.

An eco-labelling system, even though voluntary, might be considered as causing unnecessary barriers to trade under the provisions of TBT if:

* The criteria that the product must conform to in order to qualify for the label, in particular with regard to the use of raw materials and production and processing methods, are not based on objective or scientific consideration or fail to take into account adequately the production processes prevailing in other countries.

* Procedures for verification in granting the label are unnecessarily strict or rigorous, making it almost impossible for a foreign producer to obtain the label.

* The eco-label is adopted for a product that is almost entirely imported and the right to grant an eco-label rests entirely with the authorities of the importing countries.

G. Others

A number of other measures might lessen the potential adverse effects of eco-labelling schemes:

* Promote the credibility of eco-labels, especially those from developing countries, and their acceptance by consumers.
* Facilitate the transfer of cleaner technology to developing countries.
* Provide financial support (by developed countries) to help developing countries improve their environmental performance.
* Increase the awareness of consumers and industry about environment-friendly products.
* Implement environmental management systems to assess the costs and benefits of applying for an eco-label.
* Improve dialogue and cooperation between manufacturers and suppliers.
* Seek greater integration of trade and environmental policies.

V. CONCLUSION

The adoption of environmental management systems (and the associated environmental auditing) and eco-labelling have the potential to inadvertently reduce the export competitiveness and market access of developing countries.

Of the two actions, eco-labelling has the greater potential in the short run to reduce export opportunities of developing countries, assuming that it becomes a significant marketing tool in developed countries. Developing countries lack the pertinent information and infrastructure (certification and accreditation bodies) needed to qualify for many eco-labelling schemes. Their firms have limited access to cleaner technologies and would incur relatively high compliance costs in meeting the requirements for eco-labelling schemes, which are becoming even greater with the growing use of process-related criteria for awarding eco-labels. In addition to having potential economic impacts, eco-labelling schemes could also distort the environmental priorities of developing countries by diverting pollution reduction expenditures to address the concerns of developed countries.

In the long run, however, environmental management systems (and the associated environmental auditing) has the greater potential to reduce the export competitiveness and market access of developing countries. Firms in developed countries may affect firms in developing countries by adopting policies that exclude the import of production inputs and products and by dropping intermediate suppliers in those countries if they do not meet, for whatever reasons, environmental standards. As in the case of eco-labelling, developing country firms will lack the resources to adjust to the requirements of environmental management systems and will have insufficient access to certification bodies that could provide services at a reasonable cost and in a timely manner.

The TC 207 working documents have the potential to overcome some of these negative impacts. However, more efforts in the areas of international labels, mutual recognition, equivalency, transparency, participation and technical assistance are needed to ensure that environmental management systems and eco-labelling are not perceived to be or do not even become barriers to trade.

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