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Addressing Market-Access Concerns of Developing Countries arising from Environmental and Health Requirements

LESSONS FROM NATIONAL EXPERIENCES

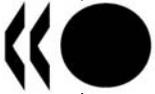
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Joint Working Party on Trade and Environment

**ADDRESSING MARKET-ACCESS CONCERNS OF DEVELOPING COUNTRIES ARISING FROM
ENVIRONMENTAL AND HEALTH REQUIREMENTS: LESSONS FROM NATIONAL
EXPERIENCES**

OECD Trade Policy Working Paper No. 5

by Dale Andrew, Karim Dahou and Ronald Steenblik

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ABSTRACT

This report represents the stock-taking of the lessons learned from a series of twenty OECD case studies which examined specific market access problems arising from environmental and health requirements faced by developing country exporters. Together with a series of UNCTAD case studies and the experiences exchanged at an OECD Global Forum on Trade workshop, held in New Delhi in November 2002, the focus is on the approaches that contributed to addressing the market access difficulties. These are divided into two sections: first, those addressing information flows and capacity building needs of developing-country exporters, undertaken both by governments and non-governmental organisations; and then the procedures in developing, implementing and reviewing regulations and standards. While covering a range of natural resource-based exports and manufactures and one traded service in key OECD import markets, no generalisation can be drawn regarding the scale of the market-access problems created by environmental and health requirements.

Keywords: environment, standards, regulations, market access, developing countries, capacity building.

ACKNOWLEDGEMENTS

The OECD Joint Working Party on Trade and Environment (JWPTE) in 2001 began work on the development dimension of trade and environment through a series of case studies examining effects of environmental requirements on developing country exporters. This stock-taking of the lessons learned has been prepared in the Trade Policy Linkages Division of the Trade Directorate by Dale Andrew, Karim Dahou and Ronald Steenblik, with input from the Global and Structural Policies Division of the Environment Directorate. It also benefited from comments by the Delegates to the JWPTE. The Secretary-General has agreed to declassify the document, under his responsibility, with the aim of bringing information on this subject to the attention of a wider audience.

It can be accessed on the internet at: <http://www.oecd.org/trade> and at <http://www.oecd.org/env>. It is also available in French.

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ADDRESSING MARKET-ACCESS CONCERNS OF DEVELOPING COUNTRIES ARISING FROM ENVIRONMENTAL AND HEALTH REQUIREMENTS: LESSONS FROM NATIONAL EXPERIENCES

EXECUTIVE SUMMARY

The effects on developing-country exports of environmental requirements arising from OECD members' environmental and health regulations, as well as from standards set by governmental and non-governmental organisations, has been a long-standing subject in the trade and environment debate since the "tuna-dolphin" dispute of the early 1990s. In refocusing its attention on the development dimension of trade and environment in 2001, the Joint Working Party on Trade and Environment decided to adopt a case-study approach to investigate the actual reactions of the main actors to market access problems caused by the environmental requirements. The twenty cases researched, together with another fifteen undertaken by the UNCTAD at the same time, formed the backdrop to a multi-stakeholder dialogue that took place at an OECD Global Forum on Trade workshop, held in New Delhi in November 2002, in collaboration with the Indian government.

This note represents the JWPTE's stock-taking of the lessons learned from the studies and discussions. These lessons, relate to specific market access problems arising from environmental and health and safety requirements, and approaches that contributed to solving them. While the OECD and UNCTAD case studies cover a range of natural resource-based exports and manufactures and one traded service, and cover key import markets and a cross-section of developing exporters, no overall generalisation can be drawn regarding the scale of market-access problems created by environmental and health and safety requirements.

Several initiatives have been taken in recent years to address information flows and capacity building needs of developing-country exporters by governments, largely in the context of development co-operation. Non-governmental organisations have also been working increasingly with developing countries affected by the voluntary standards they have set. For example, the Code of Good Practice for Setting Social and Environmental Standards, developed by the ISEAL Alliance, aims at promoting good practices by its members, which are non-governmental standard-setting and conformity assessment organisations. In addition to several web-based information systems set up by OECD Members, the Brazilian national standards institute Inmetro operates an early-warning system. The UNCTAD Secretariat has been carrying out exploratory activities for a Consultative Task Force on Environmental Requirements and Market Access for Developing Countries, which would also look at non-governmental measures.

Procedures in developing, implementing and reviewing regulations and standards by those responsible for setting them is the other half of the "environmental requirements and market access" set of concerns by developing countries. With the advent of the WTO and its TBT and SPS Agreements, information on regulations is today more readily available than it was prior to the mid-1990s. The adoption of international standards, promoted by these Agreements, is frequently not the appropriate solution in cases of environmental and sanitary and phytosanitary protection, since absorptive capacities, climatic factors and social preferences often differ — calling for varied levels of protection. Other mechanisms recognised by the WTO Agreements, such as equivalency and mutual recognition agreements, have generally been difficult to negotiate and remain underutilised. The IFOAM-FAO-UNCTAD International Task Force on Harmonisation and Equivalence in Organic Agriculture is investigating the development of these and other models to address obstacles to technical equivalence and conformity assessment between different national organic systems.

I. Introduction

1. In 2001 the OECD's Joint Working Party on Trade and Environment (JWPTE) embarked on a programme of work to enhance understanding of the trade effects, perceived or actual, on developing-country exports of the environmental regulations and other technical measures taken by the governments of OECD Members and private bodies. It was especially concerned to establish to what extent such measures might have affected market access for developing countries. The first phase of this work involved the preparation of 20 case studies, covering a wide range of importing and exporting countries, sectors, issues and types of environmental measures.¹ These *Case studies* are listed in Annex 1, with a breakout by sector and environmental issue in Annex 2.

2. These case studies formed the basis for an OECD Global Forum on Trade which brought together around 100 experts from OECD Member countries and developing countries.² In two days of focused discussion, workshop participants explored concerns common to developing countries in connection with several topics raised by the OECD case studies, as well as work undertaken by the United Nations Conference on Trade and Development (UNCTAD).³ Topics included development of environmental and certain sanitary and phytosanitary measures, trade issues and developing-country responses, and responses to developing-country concerns. Among other things, the participants raised the possibility of more and better transparency and communication with developing countries on new and revised technical regulations and voluntary schemes, an institutional response to the proliferating voluntary standards and technical regulations affecting developing country exports, and the need for effective capacity-building and technical assistance appropriate to the needs of developing countries.

3. In December 2002, the JWPTE decided to take stock of the lessons learned from the studies and discussions that have taken place so far. It was agreed that the Secretariat would *prepare a report drawing lessons learned from the case studies, as well as experiences shared in the New Delhi workshop. This work will examine approaches suggested by the case studies that contributed to solving the problems identified; practices that are currently in place or being developed; and other practical tools that have been developed to respond to the concerns of developing countries. It will focus not only on the importance of capacity building to make better use of existing instruments, such as the WTO Technical Barriers to Trade and SPS Agreements, but will also underscore the importance of Member countries' strengthening their notification and consultation procedures with trading partners, and improving information exchange as well as other practical tools.* This document presents the results of that stocktaking, taking into account the comments and proposals of members of the JWPTE.

¹ These case studies have been compiled in the document: OECD (2002), "The Development Dimension of Trade and Environment: Case Studies on Environmental Requirements and Market Access", <http://webdomino1.oecd.org/comnet/ech/tradeandenv.nsf>. They have also been combined with other relevant material in a CD-ROM, "An OECD Took Kit for Trade Policy Makers II: The Market Access Challenge in the Doha Development Agenda", OECD, August 2003.

² OECD Global Forum on Trade "Workshop on Environmental Requirements and Market Access: Addressing Developing-Country Concerns" (in co-operation with the Government of India), 27-28 November 2002, New Delhi, India.

³ All UNCTAD studies and regional synthesis papers are accessible on-line at http://www.unctad.org/trade_env/test1/meetings/standards.htm. A publication with the main papers and an overview chapter is forthcoming shortly.

Environmental policies, development and trade

4. At the WTO Doha Ministerial Conference of 2001, in strongly reaffirming their commitment to the objective of sustainable development, as stated in the Preamble to the Marrakesh Agreement, Ministers recognised “that under WTO rules no country should be prevented from taking measures for the protection of human, animal or plant life or health, or of the environment at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, and are otherwise in accordance with the provisions of the WTO Agreements.”⁴ WTO Ministers at the same Conference also instructed the Committee on Trade and Environment to give particular attention to the effect of environmental measures on market access, especially in relation to developing countries.⁵

II. Overview of developing-countries’ concerns

5. Given that the Doha Declaration places the needs and interests of developing countries at the heart of the WTO’s work programme (paragraph 2), it is worth in particular examining means of facilitating the access of developing countries to the markets of developed countries, as shaped by various market-adjusting or market-informing actions. Giving attention to the effect of environmental measures on market access, so as to avoid unnecessary obstacles to trade which might result from the development of various environmental requirements, is an important part of that process.⁶

6. In order to identify ways in which regulators, non-governmental and other standard-setting bodies can minimise unnecessary impacts on developing-country access to OECD markets arising from environmental requirements, it is useful to examine the concerns raised by the developing countries themselves. This should not only provide a clearer overview of the difficulties faced by some exporting

⁴ On several occasions The WTO Appellate Body has recalled the possibility for countries to set environmental and health protection policies. In the Gasoline case, the Appellate Body said: “Members are free to adopt their own policies aimed at protecting the environment as long as, in so doing, they fulfil their obligations and respect the rights of other Members under the WTO Agreements”. [United States-Gasoline case, paragraph 30 of the Appellate Body Report, reiterated in the Shrimp-Turtle case, paragraph 186 of the Appellate Body Report.] In interpreting Article XX of the GATT, the WTO Appellate Body has stated that “WTO Members have a large measure of autonomy to determine their own policies on the environment (including its relationship with trade), their environmental objectives and the environmental legislation they enact and implement. So far as concerns the WTO, that autonomy is circumscribed only by the need to respect the requirements of the General Agreement and the other covered agreements”. [United States-Gasoline case, pages 29-30 of the Appellate Body report.] Similarly, in the decision on “Measures affecting asbestos and asbestos-containing products” (Asbestos case) the Appellate Body stated: “It is undisputed that WTO Members have the right to determine the level of protection of health that they consider appropriate in a given situation”. [Asbestos case, paragraph 168 of the Appellate Body report.]

⁵ Doha Ministerial Declaration, para. 32 (i).

⁶ “Environmental requirements” has been used in the OECD *Case Studies*, the New Delhi workshop and the related UNCTAD work, as a generic term to include environmental, sanitary and phytosanitary measures which may take the form of either mandatory governmental regulations or voluntary standards, and the latter may be governmental or non-governmental.

countries, but also help to understand more clearly the consequences that many measures have for other developing countries.⁷

7. These concerns — as expressed by developing countries — are set out below in four categories relating to (a) access to relevant information; (b) difficulties in adjusting to technical regulations and standards; (c) difficulties concerning the procedure for the development of standards and regulations; and (d) the mechanisms for implementation and periodic review of such measures.

(a) Problems of access to information

- *The transmission of information on importers' environmental requirements to the exporting countries or sectors concerned — in particular the least developed countries (LDCs) and small and medium-sized enterprises (SME) in developing countries — is sometimes insufficient, distorted, delayed or even non-existent.*

8. For example, the exporting country's government or industry may be caught by surprise, and therefore have insufficient time to respond before its exports are affected.⁸ Nowadays, with WTO notification procedures and the possibility of diffusion through the internet, this problem has become less acute, but it still occurs in poorer countries and in industries dominated by small and medium-sized enterprises.⁹ There is usually no real problem in getting information to a country; but getting it distributed in a timely manner to the domestic industry requires that effective communications networks be in place.

9. Two sets of reasons can explain why these difficulties particularly affect LDCs: First, their governmental capacities are usually severely limited and it is difficult for them to transmit information to economic operators.¹⁰ Second, foreign direct investment is very low¹¹ in LDCs. Producers are therefore often isolated from the distribution networks that could market their products in developed countries, and private networks do not pass on information as rapidly as in other developing countries.¹²

- *The exporter may lack the capacity necessary to comprehend important details about the importer's measure or to have them translated.*

10. This problem is of course linked to the speed and quality of information flow, but is also a function of the technical complexity of the measure and the number of words required to describe it.

⁷ In the case study on the banning of azo dyes by Germany, this measure also applied to second-hand products, including clothing, which were massively redirected to African markets, thereby affecting local industries. OECD (2002, p. 25).

⁸ See, for example, "Limits on aromatic amines in textiles coloured with azo dyes" (OECD, 2002, p. *et seq.*).

⁹ See, for example, the case studies on limits on formaldehyde (OECD, 2002, p. 15 *et seq.*), chemical residues in leather goods (p. 30 *et seq.*) and cadmium in plastics and PVC (p. 38 *et seq.*)

¹⁰ See UNCTAD (2002), Expert meeting on environment requirements and international trade, Paper by Mr. Ansoumane Berete, Head of the Trade Policy and Agreement Division of the Ministry of Trade of Guinea and Paper by Mr. Natama Incha, Delegate of Niger: http://r0.unctad.org/trade_env/test1/openFl.htm

¹¹ According to UNCTAD (2001, p. 31), the 49 LDCs — countries with a per capita GDP of less than \$900 — account for one-quarter of the world's countries and one-tenth of its population, but only attract 0.5 % of foreign direct investment.

¹² Industries characterised by strong vertical integration facilitate the rapid circulation of information between distribution networks in developed countries and subsidiaries and subcontractors operating in developing countries.

Translation of necessary documentation does not come cheap. In some cases, the government of the exporting country may simply adopt a measure identical to the importer's. This, in itself, may not be a bad thing — *if* the exporting country understands the purpose of such a measure and it is appropriate to its local circumstances.

(b) Inadequate means for adjusting to environmental requirements

- *The exporter may not have the capacity necessary to apply certain measures or to conduct conformity assessment.*

11. Implementation and conformity assessment require monitoring systems, and access to supporting¹³ infrastructure comprising laboratories (public or private), metrology, data and trained agents. Quality or residues testing, notably, requires means which the exporter, locally, often lacks. This problem occurs most often when the importer has fixed a limit on residues close to the detection limit for the substance (OECD, 2002, p. 21 *et seq.*). The risk of this type of situation arising is higher when the substance in question is a complex organic compound (insecticide or aromatic amines, for example) which must be measured by sophisticated (and expensive) laboratory equipment operated by highly qualified technicians.

12. Developing countries may sometimes lack the necessary technical resources, as is shown by the case studies on Guatemalan producers of snow peas and Indian producers of hides and skins. Both cases involved a measure limiting chemical residue levels (respectively, of pesticides and colouring agents), and the producers did not have the necessary equipment to measure small concentrations of residues. In the Guatemalan case, development co-operation assistance in the end procured the equipment necessary to evaluate pesticide residues, but long after the first problems of market access appeared. Faster transmission of information about the measure in question, and potential ways of adjusting to it, could have avoided unnecessary losses. In India, these tests could be conducted using the available equipment, but only for levels higher than those authorised, which were in fact close to the detection limit. As a result, the government simply decided to ban the use of azo dyes, even at levels that pose much reduced risk to human health.

- *The exporter may not have the knowledge required to adapt its processes or production methods, in particular because of the uniqueness of local conditions or insufficient prior research.*

13. To be able to comply with measures on limits on chemical residues, it may be worth replacing the use of chemical products by integrated pest-management methods. However, extensive research is often necessary to obtain proper results. For example, though the shift to organic production allows new markets to be targeted, in the short term, at least, it may involve lower returns.¹⁴

¹³ Contrast, for example, the case studies relating to aromatic amines in textiles, and pesticides in tea, with the case study on formaldehyde in textiles.

¹⁴ See, especially, the case study on limits for chemical residues in tea (OECD 2002, p.67 *et seq.*). Many Indian producers had moved over to organic production methods, but the majority of the estates were barely profitable, or not profitable at all.

- *Exporters involved in primary industries dependent on biological processes — agriculture, fishing and forestry — are sometimes expected to apply production methods transferred from OECD countries that may be inappropriate to their local conditions.*¹⁵

14. Even when environmental measures call for the application of production methods more suitable to local conditions, the knowledge of how to do that may be lacking. In cases where major investments in productive capital or pollution control are required, the exporter may lack the necessary capital. This type of problem typically arises in industries that require production-specific machinery and chemical agents.

- *Exporters, particularly small and medium-sized enterprises, may have weak bargaining power when dealing with requirements developed by commercial or non-governmental entities.*

15. Voluntary, non-governmental standards can sometimes be as constraining as mandatory governmental regulations. For example, buyers or final retailers that choose to conform to a voluntary standard may insist that certain environmental conditions be met along the production chain, and the producer or exporter has little choice but to meet them.¹⁶ As described in one of the case studies, the largest German distributors of fresh products have set up a system of re-usable containers in order to limit the impact of a directive that made them responsible for the cost of recycling packaging. Even though the use of reusable packaging is not mandatory, this measure made it unavoidable in certain situations, which posed major problems for some developing countries because of the cost, time and logistic difficulties involved in returning reusable packaging.¹⁷

16. In the case of the MSC eco-label for responsible fishery practices created by Unilever and the World Wildlife Fund, difficulties in qualifying for the label were experienced by small-scale fishermen, who are particularly numerous in developing countries.

(c) Issues involving the development of standards and regulations

- *Increasing variation in environmental requirements by governmental authorities and NGOs — and regulations differing from international norms*

17. According to the developing countries, one of the chief problems of market access that they face lies in the proliferation of technical measures — and the difficulty of complying with requirements that are heterogeneous. Examples of standards adopted by non-governmental organisations and private agencies show that there can arise “competition” between certification or labelling schemes addressing the same environmental problems. Where there are international norms, but countries decide to impose requirements that are stricter than these norms, exporters have complained of the costs of both keeping up with changing measures and having to deal with different regulations in different markets.

¹⁵ This is illustrated by a case study on a U.S. measure limiting sea turtle by-catch rates in shrimp fishing. The measure was also applicable to exporters (OECD 2002, p. 97 *et seq.*). U.S. producers had complied with the regulation by using more selective gear, but which was ill-adapted to the situation in Costa Rica. This country’s shrimp fishing areas contain a great deal of organic debris that weighed down harvesting gear and increased vessels’ fuel consumption, thereby raising production costs.

¹⁶ On the role of retailers and “supermarketization”, see OECD (2003).

¹⁷ The EU and the FAO aid helped Guinea regain competitiveness lost due to packaging requirements imposed on their fish and pineapple juice exports. See paper by Mr. Ansoumane Berete, Head of the Trade Policy and Agreement Division of the Ministry of Trade of Guinea: http://r0.unctad.org/trade_env/test1/openFI.htm. Then click on “Meetings” and 2-4 October 2002.

- *Standards that are inappropriate to the ecology of the producing area*

18. Measures inspired by domestic considerations, however justified they may be, may be established on the basis of parameters that are inappropriate to the exporter's situation, as shown by certain measures intended to address the production phases of a product. Examples include standards relating to the sustainable harvesting or fish or organic methods of production of agricultural products that fail to take into account local environmental and cultural differences.

- *Requirements are actually designed to create new market opportunities for a "cleaner" production method, chemical agent or pollution-control technology*

19. A developed country may legislate the tightening of a residue limit, or impose a complete ban on a substance, once an economically and technically acceptable substitute becomes available. However, such substitutes are sometimes proprietary or expensive and not readily available to developing-country exporters, either because of their high costs or technical complexity. It is particularly in respect of these types of situations that developing-country exporters have sometimes alleged that a measure has been motivated by other interests, and not just a desire to protect the environment or public health.¹⁸

- *Need for greater openness and transparency, including early consultation and impact studies*

20. Where notification and prior consultation procedures, e.g. as provided for in the WTO SPS and TBT Agreements, have been minimalist or not followed, developing-country exporters have felt slighted in not having been able to influence the development of the environmental requirement. Use of established prior consultation procedures appears to have facilitated two-way communication and has even in some cases led to revisions of (proposed) measures that exporting countries have found to be objectionable. Some national and non-governmental standard-setting procedures provide forewarning to exporters that a new environmental measure is being contemplated.

(d) Issues with implementation and review mechanisms

- *Insufficient or temporary deferral in implementation*

21. Certain measures may provide, in their provisions, for deferral of their implementation in the case of developing-country exporters. They can thereby help solve the adjustment difficulties which affect this category of exporters more specifically.

- *Insufficient access to equivalence agreements*

22. Separately from the process of technical harmonisation, an equivalence agreement can allow an importing country to recognize an exporting country's environmental, health or safety measure as equally effective in satisfying its appropriate level of protection. Equivalence thus safeguards the aim of the environmental requirements — protection of the environment — while allowing a certain degree of flexibility choosing the means of achieving it. The *Case Studies*, however, show that developing countries can encounter difficulties in negotiating such agreements.¹⁹

¹⁸ See the case study on "Limits on aromatic amines in textiles coloured with azo dyes" (OECD, 2002, p. 25).

¹⁹ Indeed, access to equivalency agreements is an issue for all countries, not just developing countries. There are relatively few such arrangements because they are difficult and resource-intensive to negotiate.

- *Difficulties in negotiating mutual recognition of procedures for conformity assessment*

23. Mutual recognition agreements (MRA) provide that conformity assessment procedures used by a certification society or accreditation agency will be accepted by others. In theory, therefore, they can prevent a multiplication of certifications, costly in time and money, from excessively limiting market access of developing-country exporters. Again, use of this type of instrument has generally been quite limited.

- *Need for more regular review of environmental requirements*

24. Certain environmental and health measures envisage at the outset that they will be subject to subsequent review in order to take into account developments in understanding of the consequence of the environmental problem or the data underpinning the original measure. In some cases, developing countries have expressed concerns about the continued relevance or actuality of an environmental measure.

25. In summary, the above list of concerns expressed by developing country exporters, shows that causes of market-access effects of environmental requirements vary considerably. In many cases, major changes in processes and production methods may be required in order to meet the importer's new requirements, and there is simply no way of avoiding imposing adjustment costs on them. Some of the *Case Studies* nevertheless underline the problems of access to information that exporters may encounter. Although all these constraints have obvious cumulative effects — e.g. delayed notification of a measure can add to the adjustment costs — it is still, for all that, worth distinguishing them. While responsibility for difficulties of a “structural” order can primarily be laid at the door of the developing countries, the developed countries, as the authors of the bulk of environmental and health measures, also for their part need to realise that the development of such measures should meet minimum levels of transparency and consultation. Indeed, raising awareness of the possibility of various impacts on market-access, and honest efforts to provide full advance information on new requirements, can go a long way towards minimising their effects on trade. In the following sections, responses to developing countries' concerns are outlined, based on the OECD and UNCTAD *Case Studies*. Section III addresses capacity building and support for research and appropriate technology. Sections IV and V examine, respectively, aspects of the development; and implementation and review of environmental requirements. Section VI makes some concluding remarks.

III. Capacity building, technical assistance and support for research and appropriate technology

26. According to Chapter 37 of Agenda 21 (UNCED, 1992), capacity building is primarily intended to develop a country's ability “to evaluate and address the crucial questions related to policy choices and modes of implementation among development options, based on an understanding of environmental potentials and limits and of needs as perceived by the people of the country concerned”. It may cover a broad range of activities aimed at improving a country's human, scientific, technological, organisational and institutional capacities and the resources available to it. In essence, it is a process that seeks to help an individual or a group to identify and take into account the problems it faces, and to acquire the understanding, knowledge and experience necessary to solve those problems, and to introduce appropriate changes.

27. Capacity building is not referred to expressly in the TBT Agreement. However, its Article 11 spells out precisely the areas in which, if requested, WTO Members shall advise or provide technical

assistance to other Members (especially developing countries) on mutually agreed terms and conditions regarding the various questions related to regulations, standards and conformity assessment (Box 1).²⁰

Box 1. Technical Assistance Provisions in the TBT Agreement

Article 11 of the TBT Agreement states that Members “*shall, if requested, advise other Members, especially the developing country Members, and shall grant them technical assistance on mutually agreed terms and conditions regarding...*”:

11.1 The preparation of technical regulations;

11.2 The establishment of national standards bodies, and participation of these bodies in the international standardizing bodies.

11.3.1 The establishment of regulatory bodies, or bodies for the assessment of conformity with technical regulations;

11.3.2 Information on how to implement technical regulations;

11.4 The establishment of bodies for the assessment of conformity with standards adopted within the territory of the requesting Member;

11.5 The steps that should be taken by their producers if they wish to have access to systems for conformity assessment operated by governmental or non-governmental bodies within the territory of the Member receiving the request.

11.6 The establishment of the institutions and legal framework that would enable them to fulfill the obligations of membership or participation in regional or international systems of conformity assessment.

See *Rotherham (2002)*.

28. Although technical assistance from bilateral and multilateral donors cannot provide responses to all the concerns in Section II above, targeted support and capacity-building initiatives are increasingly playing a substantial role. The Multilateral Fund for the Implementation of the Montreal Protocol provides an example of a mechanism created by the international community in order to reduce the costs of developing countries in adjusting to an environmental standard. It is intended to provide financial and technical assistance, including technology transfer, for the application of measures to control emissions of ozone depleting substances.²¹

29. Developing countries could also on their own initiative evaluate the impact of environmental measures on their market access and measure the relative importance of such access to their economic development. Countries with similar development problems can share access to their information systems and analytical tools and use their capacities to help neighbouring countries introduce their own arrangements. Brazil’s national standards institute and enquiry point, Inmetro, has an exemplary system of

²⁰ WTO, “Technical Barriers to Trade”, in *World Trade Organization: Training Courses*, Geneva, [//www.wto.org/english/thewto_e/whatis_e/eol/e/wto03/wto3_7.htm](http://www.wto.org/english/thewto_e/whatis_e/eol/e/wto03/wto3_7.htm)

²¹ Eligible for project funds aimed at helping developing countries phase out gradually (over a rather longer time than developed countries) the use of methyl bromide, a fumigant used in agriculture as a pesticide. As developing countries used this product rather intensively, especially in their horticultural crops for export, the developed countries decided to support their efforts to adjust to the measure by gradual prohibition. Some 58 projects supporting research for alternatives to the use of methyl bromide are currently being financed by the Fund in 36 countries. See OECD (2002, p. 107 *et seq.*)

notifying and identifying emerging standards to Brazilian firms, which was recently extended to firms in other Mercosur countries.

Improving information flows: capacity building and technical assistance

30. Improving the information flow to key actors can respond to several of the needs reflected in the concerns itemised in Section II. The first is a need for precise information about the requirements set out in an importer's environmental measure. The second concerns information on market opportunities offered by the measure in question. A third concerns information about the most effective ways that producers can adjust to the measure, including modifying their processes and production methods.

31. An environmental measure may remain largely unknown in the exporting country in cases when the sector concerned in the exporting country consists predominantly of SMEs or when products contain many components from several suppliers. These diverse factors come into play simultaneously in a case study of Philippine exports of textile products to Japan. Exporters were still unaware, thirty years after its entry into force, of a Japanese law limiting formaldehyde residues in finished products (OECD, 2000, p.15 *et seq.*). As several *Case Studies* show, private operators in the supply chain, from importers through to exporters and ultimately producers, now provide a considerable amount of technical advice. Lack of awareness also seems to cause problems in cases even where it would be easy to conform to the measure concerned (generally a residue limit), by slightly modifying the production process or by paying more attention to methods of using the offending substance.²² Also, when chains of responsibility are diffuse and fragmented and the risk to a particular producer of suffering financial loss is sufficiently low, the measure may be ignored at that given point in the chain. As is shown by the *Case Studies* on cadmium in plastics and formaldehyde in textiles (OECD, 2002, p. 38 *et seq.*), these factors, when combined, may hinder honest efforts by importers to obtain assurance that all the segments of the supply chain have complied with the applicable requirements.

32. Although for some developing countries technical advice provided by private operators may be sufficient, the least-developed countries (LDCs) may benefit from specially adapted schemes. Chains of responsibility are integrated in sectors or industries that are vertically concentrated under the umbrella of large firms; the more-advanced developing countries tend to attract the sub-contractors, subsidiaries and branches of large companies from developed countries and the latter tend therefore to inform them about or indeed prepare them for the introduction of a technical standard that might make their market access more difficult. The LDCs, on the other hand, are often marked by fragmentation of their industrial or agricultural fabric. The vast majority of African farmers, for example, operate in a system of family farms often spread over large areas. It is difficult for them to keep abreast of new technical regulations or standards that may affect their production. The background work by UNCTAD on organic agricultural production has shown this to be the case. Marketing boards²³ or co-operatives can in such situations play an important role in disseminating information.

33. The provision of information on environmental requirements, and how to comply, varies according to whether the standards and regulations involved are established by government authorities or private organisations. Information on standards and regulations established by government authorities are

²² See the case studies on "Limits on formaldehyde in textiles" (OECD, 2002, p. 15 *et seq.*) and "Limits on cadmium in plastics and PVC" (OECD, 2002, p. 38 *et seq.*).

²³ See, in particular, the proposals put forward by the Ministry of Trade and Industry of Tanzania, aimed at creating "marketing information centres". UNCTAD (2002), *Expert meeting on environmental requirements and international trade*, "Strengthening capacities to respond to environmental requirements in export markets", http://r0.unctand.org/trade_env/test1/openF1.htm

provided by governments themselves, but can also be provided by importers or exporters. Examples of initiatives by governments and NGOs are described in the following paragraphs.

Initiatives by governments

34. Governments have experimented with numerous approaches to conveying information about their (existing and pending) environmental requirements to exporters. Many of these approaches are used in combination and are intended to address different information needs.

35. The notifications that countries make to the TBT and SPS Committees, and the summary compilations that the WTO Secretariat makes of these notifications, are valuable resources for exporters interested in keeping abreast of new standards and regulations promulgated by governments. These notifications rarely go into great detail on the particular technicalities of the requirements, however, which is why WTO members are required to designate an enquiry point. To avoid overwhelming these enquiry points with requests, a few countries have started to create special Internet portals that centralise information on their regulations. Such central sources of information are handy for exporters who have access to the Internet and who know how to navigate their way through it.

Box 2. Web-based information on European environmental requirements

The Netherlands, through its Centre for the Promotion of Imports from Developing Countries (CBI), has gone beyond providing information on only its own regulations and has built an on-line portal providing detailed information on environmental, consumer health and safety, and social requirements promulgated by the European Union, Germany and the United Kingdom (see <http://194.247.99.13/accessguide/>). Information is organised according to 20 of the 21 Sections of the Harmonized Commodity Description and Coding System (i.e., HS Sections), plus services. Users can obtain an overview of the requirements (in English) and view the relevant EU Directives. In addition, the site provides technical information in a series of "Access Guides" on environmentally sound production. As of May 2003, the site contained approximately 60 documents — mainly guides to cleaner-production options and pollution-abatement methods, and case studies of developing country producers who have adopted more environmentally sound methods or have successfully found new markets for environmentally preferable products. The coverage of these Access Guides may not be exhaustive, but it is certainly extensive.

36. It is also possible to organise seminars (and similar gatherings to which exporters are encouraged to attend) or even longer-term projects to reach new exporters or draw the attention of exporters to major changes in a country's standards or regulations. The workshop format has been used on several occasions. As documented in the *Case Studies*, during 1996 and 1997 the Dutch import promotion agency, CBI, working with an independent consultancy firm, jointly organised a series of workshops in several exporting countries affected by the Austrian, Dutch, German and Norwegian import prohibition on textiles and leather containing detectable residues of aromatic amines linked to the use of azo dyes. The Canadian Trade Facilitation Office also provides numerous training and consultation services to the governments, trade and investment-promotion bodies and private companies of developing countries with a view to building their capacity in the fields of export marketing. In particular, it organises trade missions to Canada and seminars for exporters from developing countries.²⁴ Workshops typically allow importers to answer questions exporters may have about their requirements, and to provide information on alternative processes and production methods. Feedback from exporters can also reveal difficulties with compliance that the importers' environmental regulators may not initially have been aware of.

37. Workshops can be expensive, however, and burdensome to organise and can only benefit a relatively limited number of participants. An alternative is to make use of technologies that allow meetings to take place over long distances. Among the most-developed countries, meetings of experts can now be

²⁴ <http://www.tfoc.ca/>

conducted by conference telephone call or remote video hook-ups. Yet even many middle-income countries may lack the requisite technology. To get around this problem, the USAID has come up with an inexpensive way to conduct “virtual meetings” via the Internet, using software to enable conference calls to work over the noisy dialup telephone lines typical of many developing countries and countries in transition.²⁵

Box 3. Sustainable Trade and Innovation Centre (STIC)

Launched as a WSSD type II initiative, the recently created Sustainable Trade and Innovation Centre (STIC) is jointly sponsored by the Commonwealth Science Council, the European Commission (DG Trade), European Partners for the Environment, and the French Ministry for the Environment. The STIC aims at supporting developing countries in responding to the challenge posed by the rapid growth in the number of environmental (and social) requirements, both government and non-governmental, by assembling in one place expertise in export promotion, innovation and sustainability issues, and developing-country leadership. In so doing, the STIC expects also to act as a platform for bringing together stakeholders from developed and developing countries “to create a more co-operative context for achieving commercial, environmental and social progress simultaneously in developed and developing countries.”²⁶ The STIC’s initial programme of activities includes:

- *Regional consultations:* These will take place in Africa, Asia, Latin America, the Caribbean and the Mediterranean region with the dual purpose of identifying services required from the STIC, and generating support and interest among major stakeholders. Two products are expected to result from these consultations: a set of regional guidelines for implementation and the design of a regional hub.
- *Pilot projects in different regions:* These projects are intended to facilitate dialogues on voluntary codes, build local capacity for innovation and eco-design and disseminate information. To date, two pilot projects on textiles and electronics have brought together developing countries and TNC representatives.
- *Annual reviews of sustainable trade issues:* These reviews will cover: market trends and opportunities, codes and regulations in export markets, production conditions and constraints faced by producers in developing countries, costs and procedures for certification, and case studies promoting and highlighting good practices of developing countries who have successfully seized market opportunities in the North.

38. Efforts by countries putting in place technical measures may even extend to sending an information mission to developing countries whose exporters may be affected by changes in the standards or regulations concerned. A Japanese information mission, for example, was sent to Thailand to inform that country’s exporters of changes in Japanese legislation on organic products (OECD, 2002, p.133 *et seq.*).

Initiatives by non-governmental organisations, public-private partnerships and intergovernmental organisations

39. The *Case Studies* document a number of instances wherein private standard-setting bodies have endeavoured to ensure that producers in developing countries are aware of their standards and know how to participate in voluntary schemes based on adherence to those standards. Such “outreach” activities are carried out most commonly by international eco-labelling schemes (e.g., the MSC) or their backers (e.g., the World Wildlife Fund), but can also be observed among some national schemes, such as Germany’s Flower Campaign.

²⁵ http://www.usaid.gov/info_technology/ied/index.html

²⁶ <http://www.epe.be/stf/brochurefinalrev.htm>

Box 4. A Consultative Task Force on Environmental Requirements

The UNCTAD Secretariat has been exploring the possibility of creating a Consultative Task Force (CTF) on environmental requirements and market access for developing countries. At the initial expert meeting where this idea was floated in 2002, there was wide-spread support for follow-up activities exploring its feasibility. Following the 2003 session of UNCTAD's Commission on International Trade in Goods and Services and Commodities the UNCTAD Secretariat has further discussed the CTF idea with experts, including the key international organisations active in the area of standards. As a project-based activity with donor support, the UNCTAD Secretariat has recently undertaken a tentative plan of exploratory activities which have been sector-focussed, including on organic product standards, and are practically oriented including studies looking at existing early warning systems and the contours of an international clearing house mechanism and its synergies with existing public and private databases.

A special workshop organised by UNCTAD and Inmetro in Brazil on the margins of UNCTAD XI in June 2004 further explored the feasibility of establishing the CTF, the objectives of which would be:

- *Analysis:* The CTF, with the support of the UNCTAD secretariat and other institutions, could conduct a systematic analysis of key trends in environmental requirements and capacity constraints in developing countries;
- *Policy dialogue:* Aided by the above-mentioned analysis, the CTF could discuss what issues are best dealt with at what level of intervention and by which stakeholders. The CTF could also promote an exchange of national experiences in pre-regulation and pre-standard setting[†] consultations. Similarly, the CTF could promote an exchange of national experiences on proactive adjustment policies among developing countries.
- *Coordination activities:* The CTF could also promote a regular exchange of information on technical co-operation and capacity-building activities by key multilateral and bilateral donors and other institutions[‡] and discuss ways of gradually improving their coordination.
- *Support activities:* The CTF could recommend adjusting and linking existing information systems to support its own activities and consider the creation of a clearing-house mechanism, placing particular emphasis on standards and other private-sector requirements. The CTF could also facilitate co-operation aimed at strengthening capacities to collect and disseminate information on environmental and health requirements in key export markets, including the creation or improvement of early warning systems.

[†]In this context, the CTF can also help raise awareness of the impacts of supply chain requirements on developing countries with retailers and other large buyers in developed countries.

[‡]This concerns activities such as those implemented through the WTO/World Bank Standards and Trade Development Facility, UNIDO, the Centre for the Promotion of Imports from Developing Countries (CBI) in the Netherlands, the Association for Technical Co-operation (GTZ) in Germany, the International Development Research Centre in Canada and the International Institute for Sustainable Development, the Sustainable Trade and Innovation Center, and WWF International.

Research and extension and technology transfer

40. For the poorest countries, and particularly when the environmental requirements affect agricultural products, direct interaction with producers provides an effective means of transferring information and knowledge. The *Case Studies* contain several examples of this kind of international agricultural extension and joint research activities (US advice on Guatemalan snow peas; various GTZ activities; UNEP's projects, and US and Australian research to find alternatives to methyl bromide).

41. The projects that the Europe-Africa-Caribbean-Pacific Liaison Committee (COLEACP) — an inter-professional association of the EU/ACP horticultural industry — has funded in Africa go beyond demonstrating how to meet established standards. They are intended also to provide information that will eventually help establish scientifically based maximum residue limits (MRLs), or import tolerances, as

alternatives to the default ones (which would be set at limit of detection) that would apply in the absence of such information.²⁷

42. The technologies that make it possible to assess a product's conformity with an environmental protection or sanitary or phytosanitary protection standards are often costly. Several of the *Case Studies* illustrate the difficulty for producers in developing countries in acquiring the equipment for measuring the residue limits for chemical inputs. This constraint, in particular, led the Indian Government to ban the use of azo dyes in textile products rather than acquire more-sophisticated equipment that would have enabled it to detect levels above the maximum legal amounts established by the German authorities (OECD, 2002, p.21 *et seq.*). On the other hand, certain Guatemalan producer co-operatives of snow peas were able to adapt their production to U.S. requirements thanks to detection equipment provided by German development co-operation (OECD, 2002, p.57 *et seq.*). These examples highlight the problems of resources for the provision of technical means to enable conformity with certain measures. Capacity building also assumes a certain degree of technical competence on the part of developing countries, for the capacity to introduce more sustainable production methods often involves technological choices for which a specific competence is required. In addition to lacking requisite financial resources, countries may need legal resources for gaining access to low-cost technologies, since to undertake certain development projects it may be necessary to acquire technologies produced by nationals of the donor country.

43. Yet transfer of technologies is not always a straightforward process. Some technologies appropriate to the situation in one country cannot simply be transferred to another country, but need to be adapted to local conditions. The *Case Studies* provide the example of TEDs (turtle-excluder devices) designed to limit the by-catch of sea turtles. Those developed for the environmental conditions of the Gulf of Mexico tended to clog with floating debris when used in the waters off of Costa Rica.

IV. Development of regulations and standards

44. Governments regularly develop environmental and health regulations, and both governments and private organisations develop standards with a view to achieving such legitimate objectives as the protection of the environment, human, animal and plant life and health. Difficulties by exporters in adjusting to the standards and regulations of importers do not call these objectives into question. However, it may happen that they impose a very heavy burden on exporters. Such is often the case, as has been seen, when the objective conditions (e.g., characteristics of the local environment, lack of human, physical or financial capital, inflexibility of the industrial system) impair the capacity of the exporters in their efforts to adapt. It may also arise that problems of transparency or notification may prevent them from competing on a level playing field with producers in the importing countries. Such difficulties are tough to foresee and generally require *ex post* solutions. Nevertheless, the promulgators of new regulations and standards can endeavour to ensure that information on the requirements is effectively disseminated *ex ante*. Indeed, experience shows that when the procedures for developing standards and regulations are open and

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The efforts made by COLEACP — with the support of the European Union and the Ghanaian authorities, which have been pro-active in this regard — to adjust pineapple production methods in Ghana to meet European regulations on pesticide residues show every sign of being a real success. Although the changes in European standards potentially threatened the survival of an industry that did not have the means necessary to detect very low residue limits, COLEACP was able to base its work on the efforts already undertaken by the Ghanaian government to develop codes of agricultural good practice to help train farmers in the use of pesticides. In this way, it was able to have the maximum limits raised slightly in cases in which the pesticides had a low level of toxicity and exports were crucial to the countries concerned. The support provided to scientific institutions to enable them to acquire accurate measurement equipment capped these efforts, and Ghanaian pineapple exports have continued to penetrate the European market. OECD (2002), “*Limiting pesticide residues in pineapples*”, *Ibid.*

transparent, they can at the very least provide forewarning to exporters that a new environmental measure is being contemplated.

Technical regulations and international standards

45. Where international standards are available, and measures at the national level are developed in conformity with these standards, variability and uncertainty about new requirements is reduced. The cost of adapting to requirements which diverge from international standards grows with the degree of complexity of the environmental and health measures. The three OECD *Cases Studies* of measures regulating organic production methods in the main developed countries provide a good example of the difficulties of adapting to dissimilar regulations. The difficulty of adjusting organic production and, more significantly, the conformity-assessment procedures, to the requirements of the various systems in place is clear.²⁸ As a rule, the proliferation of requirements adds to the transaction costs for exporters. In the extreme, it may force them either to produce products tailored for different import markets or to become more dependent on a smaller number of importers. The WTO cites four categories of costs associated with divergent regulations:²⁹

- loss of economies of scale;
- conformity assessment costs;
- information costs; and
- surprise costs.

46. The TBT Agreement encourages WTO members to base their technical regulations, standards, and procedures used for assessment of conformity with such regulations and standards, on international standards so as not to create unnecessary obstacles to trade. However, there may be cases where internationally developed standards or guidelines are not available, or they may be considered by a country to be inappropriate or ineffective in achieving national objectives. Generally, environmental measures aimed at ensuring a minimum standard for a product's characteristic take the form of technical regulations, such as product-content requirements or maximum residue limits. Requirements addressing earlier phases of the product cycle — processes or production methods — tend to (but not always) take the form of (voluntary) standards and can be certified and be awarded labels reflecting such certification.

47. While trade is facilitated when domestic measures are based on international standards, international standards have so far been developed for only a small fraction of the environmental objectives for which at least one government has issued a regulation. On the other hand, the promulgation of a domestic regulation by a major importer can prompt the adoption of similar regulations in other countries.³⁰ Whether or not such is always desirable, it increases the likelihood that countries will develop similar measures.

²⁸ Currently, no developing country is seeking to conclude equivalence agreements with more than one large trading block.

²⁹ http://www.wto.org/english/thewto_e/whatis_e/eol/e/wto03/wto3_7.htm

³⁰ Such is the case, in particular, of the ban on *formaldehyde* by a Japanese law on control of household products containing hazardous substances (OECD, 2002, p.15 *et seq.*). Adopted in 1973, this measure inspired similar regulations in many OECD countries.

48. It is important to consider why it is that developing countries who feel that international standards would facilitate trade do not more frequently propose such standards in the relevant forums.³¹ By contrast, several case studies show that developing countries are not slow to seek *bilateral* solutions to their market-access problems, especially when the affected industry or country is heavily dependent on an export market. For example, India, which sent between 25% and 70% of its textile and clothing³² exports to the German market, was very seriously affected by the ban on products processed with azo dyes.³³ This explains why Germany and India collaborated to limit the consequences of the measure.

No more trade-restrictive than necessary

49. The TBT and the SPS Agreements require that technical regulations and sanitary and phytosanitary measures, respectively, be no more trade-restrictive than necessary to meet a legitimate objective. TBT Agreement Article 2.2 reads:

Members shall ensure that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. For this purpose, technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create. Such legitimate objectives are, *inter alia*: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment. In assessing such risks, relevant elements of consideration are, *inter alia*: available scientific and technical information, related processing technology or intended end-uses of products.

Article 3, and in particular, Article 3.3 of the SPS Agreement, includes a strict definition of the conditions under which higher standards than those laid down by international standards can be adopted :

Members may introduce or maintain sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measures based on the relevant international standards, guidelines or recommendations, if there is a scientific justification, or as a consequence of the level of sanitary or phytosanitary protection a Member determines to be appropriate in accordance with the relevant provisions of paragraphs 1 through 8 of Article 5 (2). Notwithstanding the above, all measures which result in a level of sanitary or phytosanitary protection different from that which would be achieved by measures based on international standards, guidelines or recommendations shall not be inconsistent with any other provision of this Agreement.

50. Art. 2.2 of the TBT Agreement (quoted above) requires that “technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create”. In a submission to the WTO’s Committee on Trade and Environment, India implicitly questioned the balance between trade restrictiveness and protection in respect of an MRL for pesticides in tea:

[India’s] tea exports have been affected due to developed countries’ concerns about pesticide content. Although Indian exporters adhered to the maximum pesticide residue levels recommended by US Environmental Protection Agency (EPA), stricter limits ... imposed in some European countries became insurmountable, there being, apart from other problems, a cost of USD 234 per analysis.

³¹ The case concerning pesticide residues in tea (OECD 2002, p.67 et seq.) is an exception.

³² Textile products accounted for USD 11 billion and 25 % of total exports in 2001.

³³ In fact, Indian textile and clothing exports to Germany following the ban only grew at half the rate of these exports to other export markets.

Although there is no international standard specifically limiting the amount of chemical residues in tea, the Codex Alimentarius has established a limit for ethion residues in citrus fruits. The limits of ethion imposed by the measure in question were much lower than those set by Codex Alimentarius for citrus, and, moreover, lower than those envisaged by German regulations for fruits and vegetables, even though the latter are entirely consumed (whereas, in the case of tea, 85% to 98% of the chemical residues become concentrated in the leaves and then discarded after infusion).

Standards established by non-governmental bodies

51. Some of the OECD *Case Studies* describe initiatives of non-governmental organisations (NGOs) and businesses in OECD Member countries, which have often used established international guidelines as templates for their own standards. The Marine Stewardship Council (MSC), for example, based its “Draft Principles and Criteria for Sustainable Fisheries” on the FAO’s Code of Conduct for Responsible Fisheries. And the World Travel and Tourism Council (WTTC) worked with the World Tourism Organisation (an inter-governmental organisation) and the Earth Council (an environmental NGO) to develop an *Agenda 21 for the Travel & Tourism Industry* before developing its Green Globe standard for environmentally sustainable tourism.

52. A recent initiative by private standard-setting bodies underlines the importance that they attach to international standards. The ISEAL Alliance, whose membership includes several international, non-governmental standard-setting or conformity assessment organisations, has recently issued a “Code of Good Practice for Voluntary Process and Production Method Standard-Setting Procedures”. This Code, among other things, supports the principle that “International standards should be used as the basis for corresponding national or regional standards, except where they would be ineffective or inappropriate, such as in the case of fundamental climatic, geographic or technological factors”.³⁴

Flexibility

53. The TBT Agreement (Article 2.7) encourages countries to accept the measures of exporting countries as equivalent if they meet the policy objective that forms the basis for an existing national measure, even though they may differ in design. Prior to determining equivalencies — that is to say, after measures have been enacted (see Section V below) — it is also possible to introduce a degree of flexibility in the development of technical measures and the associated conformity assessment procedures.

54. Voluntary standards concerning processes or production methods generally allow some flexibility in the means by which an environmental objective is achieved. The case studies provide several examples of standards established by non-governmental organisations (MSC³⁵ or Green Globe³⁶) which seek to certify, using fairly flexible procedures, that products supplied to consumers come from sustainable methods of production. Thus, the “Basic Organic Standard” established by the International Federation of Organic Agricultural Movements (IFOAM), defines certain minimum criteria for obtaining organic certification, but allows for a considerable degree of flexibility in the technical requirements. In order to find solutions to the problems affecting developing country exports of organic products (such as conformity assessment), UNCTAD, FAO and IFOAM have set up the International Task Force on Harmonisation and Equivalence in Organic Agriculture (see Box 5 below).

³⁴ <http://www.isealalliance.org>

³⁵ OECD 2002, p.175 *et seq.*

³⁶ OECD 2002, p.193 *et seq.*

Procedures of transparency for the development of standards

55. Both consultations with stakeholders and impact assessments are meant to provide information that can help insure that the design and implementation of a regulation or standard achieve the environmental objective in the least trade-distorting manner. Consultations, especially if conducted before a regulation or standard is finalised, can help the designers of the regulation or standard understand better the range of their predicted effects, and possibly identify unanticipated and unintended consequences. This information can, in turn, help ensure that any impact study is able to answer concerns raised by stakeholders.

Conducting consultations

56. It has become routine in most OECD countries for governments, before issuing regulations, to consult with domestic stakeholders, who may include importers of goods produced in developing countries.³⁷ Such consultations may extend to third country exporters. Thus Japan held consultations with some of its commercial partners to inform them of a new law codifying organic production methods. An information mission was also sent to Thailand to prepare exporters for the changes in Japanese regulations.³⁸ Nevertheless, the case studies show that the governments of developing countries are not always aware of changes to environmental regulations and standards in developed countries.³⁹

57. Several examples show also that small and medium-sized enterprises (SMEs) or small farmers do not always learn in time of measures that may affect market access of their products. The case study on Guatemalan snow pea producers shows that farmers supported by USAID did not foresee a U.S. measure limiting the level of pesticide residues — a surprise result, considering that the production of these crops has been promoted by the co-operation agency of the country which enacted the measures in question.⁴⁰ The study points out that many programmes have been driven by production rather than marketing considerations (OECD, 2002, p. 62).

58. Private eco-labelling schemes have sometimes conducted consultations with producers in developing countries. The MSC, for example, carried out several consultations on its “Draft Principles and

³⁷ Trade networks can then help to speed up information flows about technical measures and thus reduce delays in adapting to their content. This is pointed out by a study commissioned by the European Union on the impact of the directive on azo dyes on exporters in developing countries: “Interviews carried out in India...suggest that the existing network of trade contacts is an important factor in determining the speed of adaptation. Where the governments, rather than market place contacts are the first point of call for information, there may be substantial delays in obtaining information about new restrictions in export markets.” Environmental Resource Management (1998).

³⁸ These regulatory changes are no doubt one of the reasons why both Thailand and India have recently filed requests for equivalence agreements. In fact, few developing countries have requested agreements of this kind (see above).

³⁹ Although the Philippines export textile products to Japan that are manufactured using materials containing residues of a toxic gas (formaldehyde), the bureau responsible for this country’s textile product exports was unaware of the Japanese legislation passed 25 years earlier limiting residues of this gas in household products. See OECD (2002, p. 17).

⁴⁰ Also see paper presented by Mr. Natama Incha, Delegate of Niger, to the UNCTAD *Expert meeting on environment requirements and international trade* (Geneva, 2002), http://r0.unctad.org/trade_env/test1/openFl.htm, for an illustration of the relationship between the lack of outreach on pesticide residue standards and the difficulties of hide and skin exporters.

Criteria for Sustainable Fisheries”, to which they invited stakeholders from developing countries.⁴¹ The WTTC went through a similar process in drawing up its Green Globe standard for environmentally sustainable tourism. Given the difficulty of predicting the implications of a standard, it was inevitable that such programmes should be the subject of criticism. Private schemes for certification may be able to overcome criticism provided that they allow for the possibility of changes to their measures after an initial period of implementation.

59. More recently, the ISEAL Alliance, in its “Code of Good Practice for Voluntary Process and Production Method Standard-Setting Procedures”, has made several recommendations pertaining to the consultation process. Although these recommendations can be seen also as important for transparency, they suggest a process that provides “all stakeholders ... with meaningful opportunities to contribute to the elaboration of a standard”.⁴²

Carrying out ex-ante analyses of possible impacts on developing-country exporters

60. *Ex-ante* analyses of the trade impacts of environmental and health measures are meant to provide information that can help insure that the design and implementation of a regulation or standard are likely to achieve a particular environmental objective in such a way that minimises as far as possible avoidable adverse effects on market access. The *Case Studies* provide one example of a thorough *ex-ante* review (by the European Commission in the case of its Directive on azo dyes) of the possible impacts on developing-country exporters. Private standard-setting bodies rely mainly on consultations.

61. It has been observed that regulatory impact analysis (RIA) is a “firmly entrenched practice in many OECD countries”, and that some countries’ procedures require the analysis of the effects of new regulations on trade and investment.⁴³ An RIA can provide a mechanism for taking into account the situation of exporters who would most obviously be affected by the measure, while recognising that the challenge of assessing other countries’ economic and environmental circumstances is not trivial. In the context of the EU Commission’s Action Plan for better regulation, and starting in 2003, major regulatory proposals included in the Commission’s workplan will be subject to an impact assessment covering the three pillars of sustainable development (economic, social and environmental impacts). This comes in addition to the existing practice of publishing consultation documents (known as Green Papers) on major policy proposals with a view to collecting views from interested stakeholders prior to the drafting of a regulatory proposal. In the Action Plan, emphasis is put on public consultations. Trade partners are either consulted through the WTO notification mechanism, or through other appropriate channels (e.g., bilateral

⁴¹ Nevertheless, the Marine Stewardship Council was criticised for not having included fishermen’s associations, especially from developing countries, which made it difficult for it to reflect the diversity of local conditions and the interests at stake. In fact, although efforts have been made to adapt the label to the fisheries of developing countries, as yet none have been awarded this label. With regard to the private labels that provide obvious commercial opportunities, it is essential for them to reflect sufficiently representative and diversified interests to eliminate any suspicion of conflict of interest. This is even truer of Green Globe, which is an example of a for-profit label that not only benefits its members but also its founders, who are remunerated through affiliation fees.

⁴² <http://www.isealalliance.org>

⁴³ “Several of the reviewed countries — among them the Netherlands, the United States, Canada and the United Kingdom — are highly experienced practitioners of regulatory impact analysis (...)” (OECD, 2003).

meetings, regulatory dialogues, trade and co-operation agreements, Internet consultations), sometimes upon request.⁴⁴

Early notification

62. Consultation with affected trading partners while a new requirement is being developed can be considered a form of early notification, especially if the same groups continue to track developments. Early notification of the measure to exporters concerned should allow them to prepare themselves for the changes they may have to make to their production in order to comply with the new requirement.

63. Notification of a proposed measure, as is required by the WTO's SPS and TBT Agreements in situations where a relevant international standard does not exist, or where the proposed measure differs from such a standard, appears to have facilitated two-way communication and, as described in the case study on eco-labels for forest products, has even in some instances led to revisions of proposed measures that exporting countries have found to be objectionable (OECD 2002, p. 91 *et seq.*).

V. Implementation and review of environmental requirements

Delaying implementation

64. A delay in implementation of a regulation may be granted to address difficulties faced by developing countries. For example, Germany postponed for one year application of its azo dye requirement to developing-country exporters (OECD, 2002, p. 21 *et seq.*). Arrangements for implementing technical measures may also provide for a forward announcement of the effective date of entry into force, which helps exporters understand the time frame for adjustment.

Facilitating equivalence of regulations and standards

65. The process of reaching a consensus on an international standard can be costly and often takes several years (WTO, 1998). A fairly long period of time may elapse before it is finally implemented by national regulators. In order to prevent the absence of agreement on the subject of an international standard unnecessarily restricting trade, technical harmonisation may be completed by the recognition of equivalences. Indeed, technical barriers to international trade can be reduced if governments accept that their trading partners' standards and regulations pursue identical objectives as their own measures through different means.

66. While many countries' domestic legislation such as the Japanese, U.S. and European regulations on organic products, envisage the possibility, the *Case Studies* (and other studies on the question) show that developing countries have difficulty in negotiating and concluding equivalence agreements on

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A more systematic dialogue on standards, technical regulations and conformity assessments takes place in the context of EU co-operation and bilateral or regional trade agreements with third parties (Mexico, Chile, etc.). The objective is to intensify cooperation between the parties, especially in relation to market access, by enhancing mutual knowledge, understanding and compatibility of reciprocal regulatory systems. This can include environmental legislation when dialogue on the environment provides the opportunity to share information and experiences of existing or new regulations of the EU and the partner country (see EU-China environmental dialogue or the Asia-Europe meeting on environmental dialogue).

technical regulations.⁴⁵ When the SPS Committee sought to clarify the SPS's provisions on equivalence (G/SPS/19, 26 October 2001), it decided that members should provide information regarding any equivalence agreements they have concluded. In July 2002, the Committee agreed on a format and recommended procedures for notifying equivalence agreements,⁴⁶ with a view to facilitating notifications in this area. As of mid-July 2004 no notifications had been submitted, even though a few countries had provided some information regarding their experiences with equivalence.⁴⁷

Facilitating mutual recognition of conformity assessment procedures

67. Multiple testing or certification of products can be costly for exporters, and that these costs would be drastically reduced if a product could be tested once and the testing results be accepted in all markets.⁴⁸ For this reason, both the TBT and the SPS Agreements, as well as many regional trade agreements, provide for the possibility of trading partners entering into mutual recognition agreements (MRAs).

68. An MRA for results of conformity-assessment procedures may be one of several possible tools for reducing the impact of technical measures concerning developing countries' access to foreign markets. MRAs are agreements between governmental or nongovernmental parties to accept some or all aspects of one another's activities. They are usually based on the acceptance by one party of results, presented by another party, from the implementation of one or more designated functional elements of a conformity assessment or certification system. These elements include testing, certification, accreditation and quality-assurance system registration. MRAs tend to be easier to put in place where standards are harmonised or the parties to the MRA regard their regulations or standards as equivalent (Rotherham, 2003).

69. The existence of international bodies (IAF and ILAC) and international standards on conformity assessment (ISO CASCO and others), and policy frameworks like Article 5 of the TBT Agreement, concerning conformity assessment, have no doubt facilitated the development of mutual recognition agreements. With respect to the SPS Agreement, the Codex Alimentarius Commission has taken some steps to creating a framework for technical equivalence.

70. With respect to environmental requirements, however, developing a system that supports the goal of "once tested, once certified, accepted anywhere" has proved to be more difficult than anticipated. As Rotherham (2003) has pointed out, international harmonisation of standards may be the highest priority in some cases, but in others what may be more important is mutual recognition of the competence of different national accreditation agencies. This is particularly important for environmental standards where harmonisation is often inappropriate due to differences in the absorptive capacities of eco-systems, varying economic costs and social preferences among producing countries.

⁴⁵ See WTO documents G/SPS/GEN/212, 232, 238, 242, 261, 304 and 326.

⁴⁶ WTO Document G/SPS/7/Rev.2/Add.1. Between November 2002 and March 2004, the Committee also adopted clarifications to paragraphs 5, 6 and 7 of Document G/SPS/19, culminating in a revised version of the document (G/SPS/19/Rev.1).

⁴⁷ For TBT see, for example, G/SPS/GEN/212, /232, /238, /242, /243, /261, /304 and /326.

⁴⁸ http://www.wto.org/english/thewto_e/whatis_e/eol/e/wto03/wto3_7.htm. See also Article 6.1 of the TBT Agreement.

71. The *Case Studies* show that developing countries continue to face problems of market access as a result of a lack of MRAs.⁴⁹ Thus, certain Japanese certification bodies are currently concluding “trust agreements” with Chinese counterparts under which, in accordance with Japanese legislation, the latter will be recognised as certification bodies accredited by the Japanese authorities (OECD, 2002, p. 140). This should reduce certification costs for Chinese producers.

Box 5. Certification and equivalence: the case of organic agriculture

The world market for organic agricultural products has been growing rapidly at an annual rate as high as 25% during the last decade (International Trade Centre, 2002). Farmers in developing countries have been exploiting certain comparative advantages in this sector. Nonetheless they face major problems of market access, partly because of the lack of harmonisation of the standards relating to organic products on the European, Japanese and U.S. markets.

Constraints on equivalence

The major importing countries for organic farming products have all adopted procedures for concluding equivalence agreements between sets of national organic standards. However, few agreements have been signed to date, in particular with developing countries. Only two developing countries (Argentina and Costa Rica) have concluded agreements with the EU, following lengthy procedures (four years each). At present, none have requested an agreement under the U.S. procedure and only two requests have been filed with Japan (Thailand and India). In the absence of equivalence agreements, the systems of mutual recognition of conformity assessment may also reduce problems of market access faced by developing-country exporters of organic agriculture products.

Conformity-assessment procedures

Mutual recognition of procedures of conformity assessment also tend to be complex and time-consuming. Whether official bodies need to be involved in monitoring conformity is one question that arises. Recognition of private agencies by the authorities of developed countries may achieve the same objectives more cheaply. Simplification is all the more necessary given that problems of certification can have detrimental consequences for developing-country exporters.[†] In practice, this objective could be attained through measures aimed at accepting international certification systems, authorising each Member to propose competent certification bodies for all OECD countries[‡], to recognise group certification, to authorise organic products from third countries to use the common national logo and to facilitate import procedures.

The International Task Force on Harmonization and Equivalence for Organic Agricultural Products is developing alternatives based on existing models to facilitate conformity assessment procedures, which have been identified in the OECD and UNCTAD studies as a more serious barrier for developing country access than the substance of the organic standards themselves.

[†]Chile exported large quantities of organic fruits and vegetables to Europe, but these exports have fallen sharply since ISO 65 came into being, which prompted the EU to no longer recognise Chilean certification bodies (the share of these exports sent to Europe fell from 64 to 34 %).

[‡]Ugandan organic coffee remained blocked for over six months in Kampala pending an import licence because some Member States did not recognise the certification granted by the Swedish body KRAV (OECD, 2002, p. 128).

Promoting periodic reviews

72. To avoid regulations and standards becoming obsolete or out-of-date, they are subjected to periodic reviews to ensure that the scientific evidence on which they are based is still valid and determine whether it may be possible to achieve the underlying objectives in a less trade-restrictive manner.

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In a situation where the export of Indian tea to Germany had stalled due to studies having showed the presence of pesticide residues, producers in the Darjeeling region initially set about having their tea tested. The absence of technical means persuaded them, however, to adopt organic production methods. They then came up against the non-recognition of the equivalence of the control procedures applied by ENCON (a network of professional consultants) and the EU certification bodies. (OECD, 2002, p. 67 *et seq.*)

73. Many technical regulations expressly provide for periodic reviews. Thus, when Australia issued its phytosanitary protocol for imported fresh *durian* fruit, for example, it specified that the rules would be reviewed one year after the commencement of imports (OECD 2002, p. 79 *et seq.*). Similarly, Article 6 of the draft “Proposal for a Directive of the European Parliament and of the Council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment” specifies that “by 31 December 2003 at the latest, the [European] Commission shall review the measures provided for in this Directive to take into account, as necessary, new scientific evidence.” Some countries, such as Canada, undertook thorough reviews of their technical regulations before the TBT and SPS Agreements went into effect, with the aim of ensuring that those regulations that remained in force were consistent with the requirements of the WTO.

74. Voluntary measures aimed at informing consumers that certain processes or production methods are subject to environmental and health concerns often call for periodic reviews. The *Case Studies* contain several examples of standards applied by international NGOs that have been adjusted over time in light of feedback from both those involved in the schemes and the criticisms of non-participants. For example, the *Marine Stewardship Council* (MSC) and *Green Globe* have succeeded in promoting sustainable methods of production while taking account of the trade concerns of developing countries. While the MSC was initially criticised for having insufficiently involved fishermen’s associations — and especially those of developing countries — in the development of its system, it gradually did so. As for *Green Globe*, it incorporated other eco-tourism labels and now enjoys broad international recognition, in particular thanks to its relations with intergovernmental and non-governmental organisations.

VI. Final remarks

75. The twenty *Case Studies* carried out in the Joint Working Party on Trade and Environment, together with another fifteen conducted by UNCTAD, have identified a number of market access difficulties faced by developing country exporters which arose due to environmental requirements imposed by OECD governments, private firms and NGOs.⁵⁰ The studies cover a wide range of products and environmental requirements, importing markets and exporters at various stages of development.

76. The emphasis of the research has been to understand the reactions of the main actors — exporting country, the firm and OECD importing country or NGO devising the environmental requirement — and in particular how each contributed to solving the problems encountered. The emphasis in this paper has been to identify the practical tools which have been developed, or are being developed, to respond to the information and capacity constraints of developing countries, as well as the procedures of developing measures, including notification and consultation procedures. Two general observations can be made. First, the importance of private, voluntary standards has been on the rise. Second, two common concerns keep arising: (a) those concerning the diffusion of quality information and analyses to the relevant actors and support of producers’ capacities to adjust their production to the environmental requirements and (b) those involving the development, implementation and review of the environmental requirements. The *Case Studies* found that reactions differed considerably to each of these concerns.

⁵⁰ Limited evidence indicates that overall the importance of environmental requirements has grown over the last decade. Based on the WTO environmental data base, the share of environment-related notifications rose from around 9% in the early 1990s to 15% in 1998 and 2000, dropping again to 11.1% in 2001.

The rise of private voluntary standards

77. The *Case Studies* suggest that a clear separation of “environmental requirements” — in the broad way the term has been used in the OECD and UNCTAD studies — as between mandatory regulations and private voluntary standards, is not felt so clearly at the level of the producer or exporter. Whereas such a distinction is key in relation to the obligations of WTO Member governments in notifying their technical regulations under the TBT and SPS Agreements, it proves less meaningful for the producer who must conform in either case in order to sell his product. Even when *de jure* a standard is voluntary, *de facto* in many cases it might have to be met in order for exporters to access certain markets. This is increasingly true when retailers are imposing conditions along the supply chain and in the context of globalised production where developing country producers export to specifications imposed by multinational companies. Nonetheless exporters, when they learn of new requirements, often are able to adapt their production rapidly and take the new measures in stride as a legitimate part of producing for export markets. As product standards are an integral part of producing for markets, the recognized emphasis on marketing and keeping abreast of consumer preferences, including through the development of internal management systems, makes adjustment easier. When voluntary standards address methods of production, and thus almost by definition specific local conditions, difficulties tend to be greater.

78. At the same time, private standard-setting organizations have been relatively quick in many instances to adapt and, in some cases, even revise their standards in the realization that the initial measures caused hardship to exporters. The recently adopted *Code of Good Practice for Setting Social and Environmental Standards*, developed by the ISEAL Alliance for international standard-setting and conformity assessment organizations, references ISO, OECD and WTO documents. The Code is designed to promote good practices, such as consultation with stakeholders. An initiative by UNCTAD to establish a Consultative Task Force on Environmental Requirements and Market Access for Developing Countries would address not only governmental measures but also private standards.

Information and capacity constraints and procedures for developing, implementing and reviewing requirements

79. Problems related to availability of information and exporters’ capacities to meet the requirements have received sympathetic consideration by OECD members and international organizations, and also in the context of south-south co-operation. A number of bilateral and multilateral donor agencies, as well as non-governmental initiatives, have put in place information systems. Difficulties remain with going beyond governments to reach those economic actors who need to conform, particularly in the least-developed countries and for SMEs. Use of internet-based information systems, such as the Dutch CBI information system, the Brazilian’s Inmetro early warning system (recently regionalized to other Mercosur Members), and on-line consultation forums, such as that held in 2003 on the draft EU REACH Directive, offer examples of good practices. For certain problems, greater support of research and extension may be needed — e.g., where an environmental restriction on a particular product or process is put in place before substitute technologies exist that are appropriate to the particular ecology of the producing region. Some MEAs addressing global environmental problems have incorporated funding mechanisms to support research.

80. Since 1995 and the establishment of the WTO, institutional arrangements through the TBT and SPS Agreements offer a number of possibilities for assuaging negative market-access impacts of technical regulations. Notably, early notification and consultation with trading partners, and information availability through national enquiry points have improved. In the case of environmental and sanitary and phytosanitary requirements where international standards are relatively few — for legitimate reasons of absorptive capacity, climatic differences, as well as varying social preferences — other tools for

minimising negative trade effects are recognised and expressly encouraged by the WTO Agreements, such as equivalency agreements and mutual recognition of conformity-assessment procedures. To date, these tools have not been used very much.

81. In the case of trade in organic agricultural products, the International Task Force on Harmonisation and Equivalence in Organic Agriculture (ITF), set up by IFOAM, FAO and UNCTAD, has identified the plethora of certification requirements as a major obstacle for development of the organic sector, including for exports from developing countries. The differences in conformity assessment systems were also a factor hindering market access in the three OECD studies identified the US, EU and Japanese organic schemes. Review and development of the WTO and other models for conformity assessment is a major focus of the ITF's work. Isolated examples of the use of temporary deferral of implementation and periodic review of regulations were found. Likewise, some OECD Members are expanding their use of regulatory impact analysis, as recommended in OECD regulatory reform reviews, and regularly include market access effects of domestic regulations. Market openness is one of the consensus areas where RIAs are used regularly to assess impacts on trade of various sectoral regulations.

82. Overall, the *Case Studies* illustrate that many of the concerns expressed by developing-country exporters on environmental requirements have been addressed, albeit often at a relatively late stage. There are some encouraging signs of a movement from a reactive approach of solving the problems created, to a more holistic one attempting to promote reconciliation of a high level of environmental protection and stronger growth in developing country exports. This impetus appears to be coming above all from development considerations to promote policy coherence and from considerations of making governmental regulations more efficient and trade friendly in national regulatory reform exercises. It is also important to realize the limits of established mechanisms and continue to search to fill the gaps, including by collaboration with the increasingly important private-sector actors in their efforts to promote certification of products and services that are environmentally preferable.

REFERENCES

- Environmental Resource Management (1998), “Study on the effects of suppliers in developing countries of a ban on azo dyes and products treated by azo dyes”, Report for the European Commission (DG-III), ERM, Oxford, UK.
- International Trade Centre (2002), “Overview of world markets for organic food and beverages (estimates)”, Geneva. <http://www.intracen.org/mds/sectors/organic/overview.pdf>, accessed 7 July 2004.
- OECD (2002), “The Development Dimension of Trade and Environment: Case Studies on Environmental Requirements and Market Access”, Document No. COM/ENV/TD(2003)86/FINAL, Paris, <http://webdomino1.oecd.org/comnet/ech/tradeandenv.nsf>
- OECD (2003), “Developing country Access to Developed Country Markets under Selected Ecolabelling Programmes”, Document No. COM/ENV/TD(2003)30/FINAL, Paris.
- OECD (2003), “Integrating Market Openness into the Regulatory Process: Emerging Patterns in OECD Countries”, Document No. TD/TC/WP(2002)25/FINAL, Paris, <http://www.oecd.org/dataoecd/27/25/2494869.pdf>
- Rotherham, Tom (2002), “Political Rights — Legal Obligations: The Implementation of Article 11 of the TBT Agreement”, paper presented to the OECD Global Forum on Trade “Workshop on Environmental Requirements and Market Access: Addressing Developing-Country Concerns” 27-28 November 2002, New Delhi, India. Available at <http://webdomino1.oecd.org/comnet/ech/tradeandenv.nsf>
- Rotherham, Tom (2003), *Implementing Environmental, Health and Safety (EH&S) Standards, and Technical Regulations: The Developing Country Experience*, International Institute for Sustainable Development, Winnipeg, Manitoba. <http://www.iisd.org>.
- UNCTAD (2002), “Expert Meeting on Environmental Requirements and International Trade”, held in Geneva See http://r0.unctad.org/trade_env/test1/openF1.htm then “Meetings” and 2-4 October 2002. All papers and presentations made can be found.
- World Trade Organization (WTO) (1998), “Technical Barriers to Trade” in *The World Trade Organization: A Training Package*, World Trade Organization, Geneva. http://www.wto.org/english/thewto_e/whatis_e/eol/e/wto03/wto3_2.htm

ANNEX 1. OECD CASE STUDIES ORGANISED BY TITLE, IMPORTING AND EXPORTING COUNTRY

<i>Case study title</i>	<i>Countries imposing the measure</i>	<i>Affected countries (among others)</i>
Adapting turtle-excluder devices to local conditions	USA	Costa Rica
Developing an international standard for "Green" tourism	International tourism industry group	Developing country providers in general
Eco-labels for cut flowers	German NGOs and flower industry	Colombia
The EU's import procedures for organic foods and beverages	EU	Chile, Mexico and Uganda
Import procedures for gasoline	USA	Venezuela and Brazil
The International Fruit Container Organisation Returnable packaging Initiative	German importers	Developing country exporters in general
Japan's regulations affecting the labelling of organic plant products	Japan	Developing country exporters in general
Limits on aromatic amines in textiles coloured with azo dyes	Austria, EU, Germany, Netherlands and Norway	India and Pakistan
Limits on cadmium in plastics and PVC	EU	China and Hong Kong
Limits on chemical residues in leather goods	Japan and several European countries	Argentina, India, Pakistan, Zimbabwe
Limits on formaldehyde in textiles	Japan, Korea, The Netherlands, other European countries	Philippines
Limits on pesticide residues in pineapples	EU	Ghana
Limits on pesticide residues in snow peas	USA	Guatemala
Limits on pesticide residues in tea	Germany	India
Mangrove protection initiatives and farmed shrimp	NGOs and IGOs	India
Phasing out methyl bromide	Multilateral environmental agreement (all OECD members)	Producers and exporters of horticultural crops, especially in humid climates
Phytosanitary measures affecting the import of fresh durian fruit	Australia	Thailand
Private certification of a fishery as sustainable	NGO	Developing country exporters in general
Regulating "organic" food labels in the United States	USA	Developing country exporters in general
Sustainability labels for wood and wood products	The Netherlands	Malaysia and other exporters

ANNEX 2. CLASSIFICATION OF CASE STUDIES ACCORDING TO SECTOR AND ENVIRONMENTAL ISSUE

<i>Sector or industry</i>	<i>Process or production related issue</i>	<i>Product characteristics</i>	<i>Post-product requirements</i>
Manufacturing			
Textiles and leather	—	aromatic amines (1); formaldehyde (1); various chemicals (1)	—
Plastics	—	cadmium (1)	—
Gasoline	—	sulphur, oxygen, etc. (1)	—
Primary biological industries			
Agriculture and horticulture	environmental management (1); organic methods (3); use of an ozone-depleting substance (1)	pesticide residues (3); pests (1)	packaging (1);
Fisheries	habitat destruction (1); sustainable management (1); bycatch (1)	—	—
Forestry	sustainable management (1)	—	—
Services			
Tourism	sustainable management (1)	—	—

Note: Numbers in italics refer to the number of case studies prepared on the particular product.

ANNEX 3. SUMMARIES OF PROBLEMS AND RESPONSES IDENTIFIED IN THE OECD CASE STUDIES

OECD Case Study	Type of Environmental or Health & Safety Requirement	International Standard in Existence?	Nature of Problem	Responses by main actors
Limits on formaldehyde in textiles	Technical regulation	No	Various conflicting national requirements increase costs of compliance	The Netherlands, rather than simply adopt other countries' regulations, conducted a fresh review, leading to a regulation that met same objectives but was less costly to comply with.
Aromatic amines in textiles	Technical regulation	No	Low awareness of the measure, especially among small and medium-sized enterprises (SMEs) — including availability of technology and alternative production methods	A study was conducted by a European group to assess reasons for low compliance. Other EU Member States, after Germany, adopted Germany's regulations essentially unchanged, as did eventually the European Commission
Limits on	Technical	No	Time to implement the regulation	Implementation of German regulation was delayed a year to give developing countries time to adjust
			Lack of information on requirements, especially among small and medium-sized enterprises (SMEs)	Dutch Centre (CBI) organised workshops in textile-exporting countries to explain the regulations and how to comply with them
			Inadequate testing facilities available to local companies	The requisite testing facilities were eventually established.
			Difficulty in obtaining substitute inputs, implementing alternative production technologies	Some assistance was provided by the Indian Government
			Lack of information on requirements, especially among	

OECD Case Study	Type of Environmental or Health & Safety Requirement	International Standard in Existence?	Nature of Problem	Responses by main actors
chemical residues in leather goods	regulation		small and medium-sized enterprises (SMEs) Inadequate testing facilities available to local companies Difficulty in obtaining substitute inputs, implementing alternative production technologies	The requisite testing facilities were eventually established. India's Central Leather Research Institute developed a cleaner process, using enzymes, to replace conventional tanning. In Africa, UNIDO launched a project to develop cleaner processes.
Limits on cadmium in plastics and PVC	Technical regulation	No		US and EU standards remain different.
Import procedures for gasoline	Technical regulation	No	Lack of information on requirements and how to meet them, especially among small and medium-sized enterprises (SMEs)	Enforcement Agencies in Europe established a group to improve communication with countries of origin of problem products. The Sustainable Trade and Information Centre is also providing technical assistance. U.S. Government revised its regulation to eliminate the differences.
Limits on pesticide residues in snow peas	Technical regulation	??	Lack of information on requirements and how to comply with them	U.S. Environmental Protection Agency worked with individual refiners, particularly in compiling necessary information and analysis After several shipments were rejected, a research and extension programme was established to develop integrated pest management and to teach farmers
Limits on pesticide residues in tea	Technical regulation	No		Several years later, the FAO's Intergovernmental Group on Tea, with assistance for the Common Fund for Commodities, began work to develop

OECD Case Study	Type of Environmental or Health & Safety Requirement	International Standard in Existence?	Nature of Problem	Responses by main actors
			Inadequate testing facilities available to local companies	international standards for pesticide residues.
Limits on pesticides in pineapples	Technical regulation	??	Difficulty in implementing alternative production technologies	Germany's GTZ recently provided funds to help set up an independent laboratory for testing pesticide residues in India. Tea importers and environmental NGOs have been providing TA to promote organic tea production.
Phytosanitary measures affecting the import of durian fruit	Technical regulation	No	Lack of international standard and inadequate knowledge on how to meet national standard Complicated procedures for demonstrating conformity	European Union provided assistance for conducting research leading to the development of an appropriate standard, and integrated pest management Australia has funded research in Thailand on improving its pest-control systems
Sustainability labels for wood and wood products	Technical regulation (not implemented)	No	Less-costly sampling alternatives preferred by exporter Strict interpretation of sustainable forest management — no recognition of technical equivalence Difficult to implement the standard, particularly the chain-of-custody requirements	Australia agreed to consider other, non-destructive methods of sampling of data could be furnished on their efficacy
			Low awareness of the proposed measure, especially	Dutch Government ensured that the proposed

OECD Case Study	Type of Environmental or Health & Safety Requirement	International Standard in Existence?	Nature of Problem	Responses by main actors
			among small and medium-sized enterprises (SMEs)	measure was well understood by WTO Members
Adapting turtle-excluder devices to local conditions	Technical regulation	No	Recommended technology inappropriate to local conditions	U.S. Government eventually approved alternative design for turtle excluder device more suited to Costa Rican conditions.
The EU's import procedures for organic foods and beverages	Standard (government)	Yes	Process of obtaining recognition of a countries' standards as equivalent to those of the EU can take up to six years	Temporary measure of derogation was created which allowed special import permits to be issued by an individual EU member state.
Japan's regulations affecting the labelling of organic plant products	Standard (government)	Yes	Limited pool of conformity assessment providers (related to above)	Some EU Member states have accredited developing countries' certifiers
Regulating "organic" food labels in the United States	Standard (government)	Yes	Different approach to conformity assessment from other two organics systems studies	Recently introduced
Eco-labels for cut flowers	Standard (private)	No	Lack of participation in standard-setting	Some consultations were subsequently held with stakeholders, including some producers from exporting developing countries
Mangrove protection	Standard (private)	No	Limited pool of conformity assessment providers.	Inter-governmental organisations and multilateral lending agencies have worked with producing

OECD Case Study	Type of Environmental or Health & Safety Requirement	International Standard in Existence?	Nature of Problem	Responses by main actors
initiatives and farmed shrimp	Standard (private)	Yes, in general terms	High cost of providing data necessary for conformity assessment.	countries to better understand impact of shrimp aquaculture and to suggest best practices
Private certification of a fishery as sustainable	Standard (private)	Yes, in general terms	High cost of providing data necessary for conformity assessment.	Sponsors of the Marine Stewardship Council have provided funding to help developing-country applicants to conduct necessary studies
			Need to adapt standard to local conditions	Marine Stewardship Council has engaged in dialogue and research in order to make its Principles and Criteria more relevant to fisheries in developing countries
			Limited pool of conformity assessment providers	MSC has initiated a programme to enhance the auditing and certification infrastructure in developing countries
The IFCO returnable-packaging initiative	Standard (private)	No	Limited pool of suppliers of requisite returnable crates.	
Developing an international standard for "green" tourism	Standard (private)	Yes, in general terms	Limited pool of conformity assessment providers	Certification separated from accreditation body; independent certifiers were allowed.
			High fees for participating in the scheme	Fees were lowered and graduated according to level of development of the country; community (i.e., group) certification was introduced.

Source: OECD Secretariat.

ANNEX 4. UNCTAD CASE STUDIES ON ENVIRONMENTAL REQUIREMENTS AND INTERNATIONAL TRADE

Case Studies: South Asia		
Fishery products	India (other countries)	HACCP standards
	Bangladesh (Aug 97) India (May 97 & Aug 97)	EU bans on exports of fishery products
Peanuts	India	Aflatoxin standards: setting national standards and promoting indigenous development of technology
Rice	India	Standards for pesticide residues
Spices	India, Sri Lanka	Aflatoxin standards and other SPS measures
Tea	India	Meeting standards on pesticide residues
Organic food products	India	Standard-setting, certification, exports and institutional support

Case studies: Central America		
Poultry	Costa Rica (and other Central American countries)	Effects of (a) the application of US SPS regulations concerning specific avian diseases (New castle disease) and (b) HACCP requirements on exports to the US and intra-Central American trade. Policy responses.
Shrimp	Costa Rica	US measures concerning imports of shrimp (turtle excluder devices)
Organic food products	Costa Rica	Standard-setting, certification, exports and institutional support

Case studies: Africa		
Fishery products	Kenya, Mozambique, Tanzania and Uganda	Regulation 91/493/EEC
	Kenya, Tanzania and Uganda (1997)	EU Import ban: presence of salmonellae in Nile perch from Lake Victoria
	Kenya, Mozambique, Tanzania and Uganda (1997)	EU Import ban: outbreak of cholera
	Kenya, Tanzania and Uganda (1999)	EU Import ban: fish poisoning in Lake Victoria
Peanuts	Kenya	Kenya: EU regulation on pesticide application (Maximum Residue Levels, MRLs)
Organic food products	Uganda	Standard-setting, certification, exports and institutional support

Note: UNCTAD Case studies can be found at http://r0.unctad.org/trade_env/test1/openF1.htm