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CHAPTER 1: Environmental requirements and market access for developing countries: promoting environmental - not trade - protection

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Environmental Requirements and Market Access for Developing Countries: Promoting Environmental - Not Trade - Protection

Ulrich Hoffmann, UNCTAD
Tom Rotherham, International Institute for Sustainable Development, IISD

A. Introduction

The pursuit of sustainable development requires balancing the objectives of economic growth, environmental protection and social development. Achieving a balance between these often-conflicting priorities is difficult enough at the national level, where competing interests are at least grounded in a common environmental, social and economic context. At the international level, where different countries have vastly different circumstances and priorities, it is significantly harder. One of the many ways in which this challenge manifests itself in the real world is in the conflict between the desire to promote trade by reducing non-tariff barriers and the desire to protect the environment and health through the use of technical regulations and standards.

Our understanding of the fragility and interconnectedness of our environmental support systems has grown in lockstep with our attempts to forge closer economic ties between countries, including through negotiations in the World Trade Organization (WTO) of binding commitments on trade liberalization. It is now almost universally accepted that production and consumption can have negative impacts on the environment, whether from resource use or from waste and emissions. It follows that citizens and consumers in developed countries, where environmental protection may be given relatively higher priority, are increasingly imposing their preferences on countries that – while connected both in economic and environmental terms – have fundamentally different contexts and, hence, priorities.

While not exclusively a developed-country phenomenon, consumers in OECD countries increasingly want the goods and services they purchase protected by environmental and related health requirements (ERHRs). Governments have reacted by developing regulations and standards, and non-governmental organizations (NGOs) are taking on a new role in the development of standards and codes of conduct. At the same time, a large number of companies have begun imposing strict requirements on their suppliers. Companies that do not understand their market conditions and trends risk going out of business The trend of ERHRs is an increasingly important market reality, and must not be seen simply through the eyes of protectionism.

Because trade with developed countries makes up an ever-increasing share of the gross domestic product (GDP) of many developing countries,[1] ERHRs can increase the vulnerability of developing-country economies to market conditions beyond their control and capacity to address. Particularly as tariff barriers and quantitative restrictions become dismantled in multilateral and bilateral trade liberalization agreements, there is concern that product and related process requirements have the potential to be misused by countries to create technical barriers to trade. This has led to concerns that some ERHRs are designed not so much to protect the environment or health, as to protect domestic trade interests in OECD countries.

Experience has demonstrated that trade interests can be significantly affected by the establishment of ERHRs. As such requirements in developed countries are mushrooming – increasing in both stringency and complexity – their political impact is also enhanced. Because many ERHRs affect key export sectors and many developing-country exporters have limited capacity to fulfil them, they are often viewed by developing-country governments with suspicion and resentment, notwithstanding the legitimate public policy ambitions that may underlie them. This suspicion and resentment is unlikely to dissipate in the absence of clear criteria that distinguish environment-protective from trade-protective ERHRs.[2]

Although the precise impact of ERHRs is difficult to quantify, few trade and sustainable development experts would deny that recent trends in ERHRs have important implications for developing countries, or that action is needed to address them. This paper argues for a strategic, proactive and cooperative approach, involving exporters and importers as well as standard-setters from both developed and developing countries. The paper first describes in detail the concept of ERHRs and reviews the major trends in such requirements, making the case for why this is an issue that

deserves attention. It then discusses some of the difficulties faced by developing countries, distinguishing between capacity constraints and policy limitations. Finally, it outlines some solutions to existing problems, and argues for the need to broaden the discussion beyond the WTO trade-policy community.

Our conclusion suggests that what is needed, above all, is a commitment by developed- and developing-country governments as well as by importing and exporting companies to work together to ensure stability during the time it takes for exporters to achieve compliance with ERHRs. However, no amount of external actions or assistance can compensate for a lack of activity and commitment at the national level in developing countries. In addition, it appears certain that the challenges created by non-tariff barriers cannot be solved through trade policy alone; complementary industrial policy is also of fundamental importance. The political will to address specific problems – rather than just raise general objections – requires a realistic and informed assessment of the situation; until environmental pressures are reduced, there is little likelihood that ERHRs will diminish in either number or stringency. Moreover, a proactive approach can enable developing countries not only to minimize the potential costs associated with ERHRs, but also to maximize the related domestic economic, social and environmental benefits.

While companies and governments in developing countries must take ultimate responsibility for implementing the necessary changes, there is much that developed countries can do to catalyse, facilitate and provide support through policy coherence, cooperation, transparency and capacity building. The authors believe also that a range of measures can be taken at international, regional and national levels to resolve the unavoidable – but manageable – conflict between economic and environmental priorities. But for these cooperative solutions to be identified and for partnerships to be developed, it is our firm belief that the discussion has to be broadened beyond the traditional WTO trade-policy community to include a more diverse range of stakeholders that cannot participate in WTO meetings. The Consultative Task Force on Environmental Requirements and Market Access recently created by UNCTAD is a step in this direction, and can provide a much-needed forum of dialogue with those stakeholders.

B. Scope and trends of Environmental and Related Health Requirements (ERHRs)

To be able to compete successfully, developing-country producers must – like any other producers – examine and anticipate developments in international markets for their products and services. This includes both regulatory changes and changes in concepts of product quality. Awareness of the link between consumption and consequent environmental impacts is leading not only to increased regulations, but also to the integration of "environmental quality" into consumers' perception of product quality. This is not just limited to the physical characteristics of a product; it also extends to impacts associated with its production process. Thus, if they are to defend and expand their international market shares, developing countries need to treat ERHRs as an integral part of export business strategies at the company level and of economic policy-making at the national level.

1. Scope

The term "environmental and related health requirements" is defined loosely in this paper to include a wide range of different types of voluntary standards and mandatory technical regulations. Indeed, ERHRs is not an easily defined concept. Such requirements can target physical product characteristics, production processes, or both; be developed by governments, companies or NGOs; be mandatory or voluntary; and, even when they are not requirements in the legal sense, the market context may make compliance with them a commercial imperative. Moreover, they can have a myriad of public policy objectives. For example, the regulation of pesticide residues in food products may be instigated to ensure the safety of food, protect the health of farm workers and minimize environmental impact at the point of production. Therefore, some environmental require-

ments may be related to health, food safety or occupational safety, but these should have an environmental aspect during production, use or recovery – this is why we term them ERHRs. The fact that there is no simple definition of ERHRs also makes it harder to identify, understand and address their impacts.

The production of any good or service requires resource inputs and involves some type of waste or emission. Because of this, most ERHRs seek to reduce trade in those goods or services that have *relatively* worse environmental or related health impacts. Thus, while the objective of many ERHRs is not to restrict trade per se, many of these measures do intend to regulate or reduce trade in products or services that do not comply with certain criteria or specifications. In most cases, therefore, it will not be possible to eliminate all trade implications of ERHRs; their objective is to encourage changes in production and trade patterns by altering market conditions. But while overall trade patterns will, in principle, always change, the application of ERHRs could in some cases actually lead to more trade. As a simple example, reducing the amount of pesticide residue on fruit below a threshold that has negative impacts on consumers' health will induce them to purchase and consume more, thus leading to an increase in overall trade in fruit.

Importantly, however, the trade-related impacts of ERHRs are linked not only to the requirements themselves, but also to the procedures by which they are developed, adopted and applied. In some cases, the problem may not be that the company does not want to or is unable to comply with the requirements, but simply that it is not aware of them, or cannot demonstrate that it complies. Recognizing the importance of these procedural aspects, governments have negotiated through the WTO a range of internationally agreed rules to address them. Depending on their nature, ERHRs can fall under the disciplines of either the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) or the WTO Agreement on Technical Barriers to Trade (TBT Agreement). As discussed below, although there are some overarching similarities in both the SPS and TBT Agreements, in certain respects disciplines differ significantly. However, it is important to note that many ERHRs that are commercial (not legal) imperatives, such as supply-chain requirements, do not fall under the relevant WTO Agreements.

Both mandatory and voluntary ERHRs can appear in many different forms, with many different purposes. Some of the most common relate to packaging regulations and certain SPS measures;[3] product content (e.g. limits for certain substances); process requirements (e.g. the standard on Good Agricultural Practice of the Euro Retailer Produce Working Group (EurepGAP) on agrochemicals management); banned substances; energy efficiency; recycled content; and recyclability or degradability, many of which require labelling to demonstrate conformity. Environmental product taxes and charges can be based on some characteristics of the product (e.g. on the sulphur content in mineral oil) or on the product itself (e.g. mineral oil). Take-back obligations are aimed at encouraging reuse and recycling, and related compliance costs may induce more environmentally conscious product development.[4] The next chapter in this *Review* examines developments in environmental policies related to growing volumes of post-consumer waste (in particular electronic waste), based on the principle of *producer responsibility*. It notes the growing relevance of product design requirements. Environmental requirements affecting international trade are also applied pursuant to certain multilateral environmental agreements (MEAs), such as the Montreal Protocol, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the Basel Convention.[5]

2. Trends

There is a pronounced trend of an increasing number of ERHRs. According to the WTO Environmental Database (EDB), which used to contain information on governmental ERHRs and other provisions notified under the TBT or SPS Agreements, the share of environment-related notifications under the TBT Agreement has increased from 10 per cent in the early 1990s to 18 per cent in 2002.[6] Although there is no formal tracking system for voluntary ERHRs, evidence from informal

lists suggests that these are growing at least as fast.[7] But from the perspective of a developing-country exporter, the difficulties with ERHRs relate not only to the fact that they are growing in number, but also that they are becoming more stringent and complicated, are subject to frequent changes, and do not tend to follow international standards (although, as discussed later, globalization of trade and investment flows alters this to a certain extent). Therefore ERHR requirements frequently differ from export market to export market, even if the general objective is the same.

Increasing stringency, complexity and multi-dimensionality

Environmental requirements are also becoming more stringent as a result of increased knowledge of the risk and harm to health and the environment, in particular of certain chemicals. For example, threshold limits for certain substances may be set so low (e.g. some maximum residue levels are already expressed in parts per billion) that they are no longer detectable except with the latest equipment, which may not be available or affordable in developing countries. Standards and regulations concerning maximum residue levels (MRLs) for pesticides and other chemicals are thus an issue of concern to developing countries, which, even if they wanted to comply, may not have access to the equipment needed to monitor and demonstrate compliance.[8] In some cases, previously accepted substances are being banned outright, such as mercury regulations in the United States, which have also influenced regulations in Canada. For Guatemala and Honduras, difficulties in complying with their obligations under the Montreal Protocol with regard to methyl bromide have affected their melon exports. These countries have recently obtained funding support from the Multilateral Fund of the Montreal Protocol to overcome this problem.[9]

Not only are ERHRs becoming more stringent, they are also becoming more complex. Recent examples of this trend are the draft chemical safety regulation in the European Union (EU) concerning registration, evaluation and authorization of chemicals (REACH), the draft EU regulation on eco-design for energy-using products (EUPs), and mandatory requirements on recycling and phasing out of hazardous substances for electrical and electronic equipment in the EU, Japan and Switzerland (analysed in the next chapter of this Review). Whereas in the past most standards and regulations focused on specific sectors, recent legislative projects, such as the draft REACH and EUP Directives, or the recycling-oriented policy framework in Japan, have a much broader, cross-sectoral impact that is more complicated to assess and more difficult to address.[10] This complicates the planning and implementation of adjustment measures, especially for developing countries. The often sophisticated technical issues are beyond the ability of many individual companies to address and require sectoral cooperation and government action. In sectors dominated by small and medium-sized enterprises (SMEs), this problem is even more acute.

Part of the complexity is the multi-dimensionality of an increasing number of ERHRs. That is, new regulations and standards often deal with health, food safety and environmental (increasingly also supplemented by social) requirements at the same time, which makes it more difficult to classify them and, in the WTO, to decide whether to notify a regulation under the SPS or TBT Agreement, or both. Examples include regulations on organic agriculture or on mandatory traceability and Hazard Analysis and Critical Control Points (HACCP) of food.

Shift to precaution and risk avoidance

There is a clear trend towards the more widespread use of a precautionary approach on ERHRs in situations where satisfactory or sufficient evidence on negative environmental impact is not yet available. For instance, the draft REACH Directive, which was developed pursuant to the *White Paper on a Strategy for a Future Chemicals Policy in the European Communities*, is based on the precautionary principle. It will effectively reverse the burden of proof in that it will require producers, users and importers of chemicals or downstream industries using chemicals to test, assess and take responsibility for risk management of all chemicals on the European market in order to ensure their safe use.[11] Even more important, there appears to be a move in some developed coun-

tries towards shifting the emphasis in the regulatory framework from (classical) *risk management* to *risk avoidance*.[12] In the EU, for instance, maximum residue levels of pesticides have already reached levels that are far below 0.01 mg/kg.

These recent developments, however, are occurring in the absence of a holistic approach to precaution. In other words, if the precautionary principle is applied to environmental issues it should also be applied to trade-related impacts. This should include issues such as impact assessment, proactive consultations, and the use of complementary tools to ensure that the transition period to compliance is as short, easy and uncomplicated as possible.

Internationalization of environmental and related health requirements

Enhanced globalization of investment and trade flows leads to a spreading of national mandatory or voluntary ERHRs from developed countries to other countries. This internationalization (or often transnationalization) of ERHRs de facto results in a certain harmonization of requirements, in particular through supply-chain requirements, industry codes on good practice or benchmarking. For instance, globally active supermarkets such as Ahold, Carrefour or Tesco tend to apply one global purchasing standard (e.g. EurepGAP) across a range of food items – both internationally and domestically sourced products.[13] In sectors with high trade intensity and a high concentration of related foreign direct investment in developing countries, such as electrical and electronic equipment, mandatory ERHRs in some developed countries also show signs of universal application over time.

Although, from a legal point of view, only a few international standards on ERHRs exist, many of them in key export markets are becoming "transnationalized" through supply chains. They thereby impose requirements that were created with little or no regard to developing countries' environmental situations, development priorities and trade concerns.

The way standards are created – notably voluntary requirements in the private sector – and implemented might give rise to monopolistic, anti-competitive practices. So far, such issues have not been satisfactorily addressed; they require further analysis and, if need be, anti-trust measures. Casella argues that the primary role of governments "is not that of establishing harmonization (of standards) through inter-governmental treaties, but rather setting up the appropriate regulatory framework to prevent anti-competitive outcomes (Casella, 2001).

Closely related and contributing to the trend of transnationalization of ERHRs is the increasing industrial redeployment or outsourcing of manufacturing activities to developing countries. Industrial outsourcing offers opportunities for a new, cooperative partnership whereby both exporting and importing countries can discuss means and required supportive measures to meet a certain target ERHR that is in the interest of both parties. Transnationalization of ERHRs, however, also entails the risk that inappropriate requirements could be imposed on foreign suppliers. This makes it important to ensure that local conditions that are essential for meeting ERHRs are adequately reflected therein.[14]

The third chapter in this Review, on regulation and standards for organic agriculture, elaborates further on the growing convergence between domestic requirements and technical regulations and standards in external markets.

Increasing importance of voluntary ERHRs in the marketplace

Although mandatory ERHRs are generally perceived as having a greater effect on exporters,[15] certain types of voluntary requirements are far more numerous, evolve faster and include more stringent specifications than those mandated by law (i.e. "beyond compliance").[16] These voluntary requirements are increasingly playing a key role in many sectors. Voluntary requirements include

private sector supply-chain management as well as codes, standards and related certification and labelling systems, developed either by private sector associations or non-governmental bodies. While voluntary in the legal sense, these types of environmental requirements can become commercial imperatives[17] if a large proportion of buyers require them. This is particularly acute in sectors with a high market concentration of large multi-national companies, as is the case for certain agricultural, textile and electronic products. The WTO's World Trade Report 2005 comes to the conclusion that "many standards which are public by law are based on technical specifications and initiatives by private standard-setting organizations. The question thus arises as to whether such standards should indeed be considered 'public'."[18]

Three features make voluntary ERHRs more difficult to address than mandatory ones. First, as they fall outside WTO disciplines, there are no clear rules of process that have to be followed in their development and implementation. Even where the TBT or SPS Agreements' provisions on justification, transparency and consultation would apply,[19] the mechanisms to ensure that non-State actors comply with them are relatively few and largely ineffective. Second, as they can emanate from a multitude of sources, they are much harder to track and harmonize. At the same time, successful voluntary ERHRs often become precursors of regulations, which underlines their importance for developing-country exporters. Third, although voluntary requirements are generally very important, many specific voluntary requirements never become a relevant or decisive factor in the marketplace. It is therefore difficult for companies to know whether they should invest in making required adjustments. While this has the potential to affect all exporters, various factors conspire to magnify the relative impact on developing-country exporters, particularly SMEs.

Supply-chain-driven nature of ERHRs

In an effort to respond to consumer-led concerns about the environmental sustainability of their purchasing, the private sector is increasingly developing ERHRs for suppliers. This has resulted in a proliferation of voluntary standards, codes and benchmarks, often as part of commitments under corporate social responsibility (CSR), within risk-management initiatives or integrated product policies. Various schemes combine environmental issues with social issues.

In the food sector, for example, the Euro Retailer Produce Working Group (EUREP), which includes the leading supermarkets in Europe, launched its protocol on Good Agricultural Practice (EurepGAP) for horticultural products in 1999, originally in response to consumer fears over food safety, including local food safety crises. EurepGAP seeks to provide a framework for independent verification of, on the one hand minimum social, environmental and food safety standards throughout the supply chain, and, on the other hand continuous quality assurance and improvement[20] for the production of fresh fruit, vegetables, flowers and ornamentals, green coffee, aquaculture products and agricultural raw materials from overseas (see box). Such measures may affect companies in developing countries, for example on account of the need to collect information to respond to questionnaires, traceability and audit requirements.[21] They may also create a bias towards the operation of large firms, thus risking the crowding out of small firms by the large firms and transnational corporations (TNCs).[22]

In practice, supply-chain-driven requirements seem to account for the majority of all ERHRs in international markets. In many cases, they are more dynamic, stringent and complex than mandatory requirements, envisage a faster phase-out of harmful substances or require changes in processes and production methods.[23] Effective voluntary requirements might also become precursors of government regulations. As can be seen in box 1 on the EurepGAP protocol, some voluntary ERHRs combine mandatory and voluntary requirements (in the EurepGAP case, mandatory requirements on food safety with additional voluntary requirements on food quality).[24] Also, monitoring and effective implementation of many voluntary supply-chain requirements are often stronger than for government ERHRs. However, this has more to do with the supply-chain as a mechanism for effectively pushing requirements than with the content of the requirements themselves.

Therefore, in practice, many environmental standards and labelling programmes are getting spread through supply chains (or "commercial" policies), and not through formal "trade" policy.[25] In some respects, this can be expected to create relatively greater market-access problems. While companies are likely to use supply-chain requirements as a determinant of market access (i.e. if you want to supply to me, conform to my standards or labelling requirements), governments are more likely to use them either as specific conditions for market access (e.g. restrictions on pesticides), or through market-based incentive measures that offer preferential treatment to products or producers that comply (e.g. government procurement that favours environmentally preferable products).[26]

Box 1. The Standard on Good Agricultural Practice of the Euro Retailer Produce Working Group (EurepGAP)

EurepGAP has developed an auditable standard promoting Good Agricultural Practices (GAP), which covers the production of fruit, vegetables and flowers. In September 2004 it introduced a Reference Code for (green) Coffee. EurepGAP has also developed standards for Integrated Farm Assurance and Integrated Aquaculture Assurance.

The EurepGAP protocol defines the elements of good agricultural practices (GAP) and includes topics such as Integrated Crop Management (ICM), Integrated Pest Control (IPC), Quality Management System (QMS), Hazard Analysis and Critical Control Points (HACCP), worker health, safety and welfare, environmental pollution and conservation management. EurepGAP seeks to provide a harmonized set of standards on hygiene, safety and quality for the production of food, which forms the basis of EUREP's retailer procurement requirements. The current checklist for fruit and vegetables comprises several checkpoints, a number of which require rigorous compliance, whereas others are considered "recommendations" or "minor must". The key clusters are:

- Traceability of the product back to the producing farm;
- Record-keeping and internal self-inspection;
- Varieties and rootstocks accounting and management;
- Documentation of site history and site management;
- Documentation of soil and substrate management;
- Recording of fertilizer use;
- Documentation of irrigation and fertigation practices;
- Recording of crop-protection practices;
- Documentation of harvesting methods;
- Records on produce handling;
- Records on waste/pollution management, reuse and recycling;
- Documentation of worker health, safety and welfare;
- Records on environmental issues; and
- Documentation of complaints.

Many of these requirements are similar to establishing an ISO 14001-compliant environmental management system. They all symbolize a transition to high-precision agriculture.

Producer associations or individual growers that meet EurepGAP criteria receive a certificate, which is issued by a EurepGAP-approved independent certifying body. Another option is to participate in the EurepGAP benchmarking option, which facilitates existing national or regional quality assurance schemes to prove equivalence with EurepGAP requirements. This encourages the development of regionally adjusted integrated crop management systems.

Source: EurepGAP checklist for fruit and vegetables, version 2.0, January 2004, accessible at: http://www.eurep.org; CBI, International management system, EurepGAP agriculture, in: CBI Access Guide, accessible at: http://www.cbi.nl/accessguide.

Although voluntary requirements seem to account for the majority of ERHRs for internationally traded goods, there is the apparent dilemma that under current circumstances WTO parties do little to address exporters' ERHR-related concerns.[27] This heightens the need to consider other mechanisms for ensuring that voluntary ERHRs are not inappropriately prepared, adopted and implemented. The initiatives of NGOs in this regard notwithstanding, there is also the question of how these requirements could be analysed and discussed in an intergovernmental setting. If the TBT Agreement sets out a recognized framework for helping governments to minimize trade-distorting regulations, could it not also be a helpful framework for companies to consider?

3. Summary: Scope and trends of ERHRs

ERHRs are not a distinct group of measures: they address a wide range of issues, ranging from species or ecosystem protection to human health and safety. They may also be either mandatory or voluntary, address a single issue or multiple issues, include product- and/or process-related requirements, be developed by governments or NGOs, and be relatively static or very dynamic. Some ERHRs result in differentiation within existing product categories (e.g. recycled paper is seen as an environmentally preferable alternative); others can lead to market segmentation (e.g. organic produce).

All ERHRs seek to restrict trade in goods and services that have *relatively* worse environmental and related health impacts. While mandatory regulations will likely have a greater impact on market access, it is important not to underestimate the overall impact of voluntary requirements. Not only are voluntary requirements growing in number and evolving quickly, if they become integrated into supply chains – as in the case of sustainable forest management standards – they can become commercial imperatives for certain markets. Also, whereas the procedural aspects of voluntary standards can be as important as for technical regulations, most of the provisions in the TBT and SPS Agreements are commitments between governments, and are not binding on NGOs that develop voluntary standards. Finally, standards, in particular when successful in implementing ERHRs, are often the precursors of regulations, and can eventually be integrated into mandatory measures. However, a large number of voluntary ERHRs never become relevant or decisive factors in international markets, which makes it difficult for companies in exporting countries to decide on whether they should invest in making required adjustments.

Consumers, producers, regulators and all concerned stakeholders are becoming increasingly aware of environmental and health problems and are looking for versatile tools to effectively address them. This is leading to more complex ERHRs with broader impacts, and adjustment, which often requires close coordination between a number of actors, including governments. Consequently, adjustment to new ERHRs is a growing and more serious problem, in particular in developing countries. Given their potential impact, some interest groups may use ERHRs – as with other types of standards and regulations – as strategic tools to protect markets or market share.[28]

C. Coping with Environmental and Related Health Requirements

The previous section alluded to a number of possible concerns of developing countries resulting from the imposition of ERHRs. In this section, these concerns are considered more systematically. By identifying the potential problems, it is hoped to provide policy-makers and practitioners with a better basis to find the right solutions. It would help ensure that ERHRs function as tools to promote sustainable production and consumption, and achieve the desired developmental benefits, without unnecessarily or unintentionally restricting market access or hurting the competitiveness of developing-country producers.

One of the main challenges in identifying and understanding problems related to ERHRs is the difficulty in isolating and tracking their impacts. At a fundamental level, the universally harmo-

nized product codes used in the trade nomenclature for tracking trade flows of products do not distinguish between those that are and are not affected by, or comply with, ERHRs. As a result, there is an absence of data on changing trade flows in product segments defined by ERHRs, such as eco-labelled products, or even products of organic agriculture. In addition, ERHRs are only one category of a wide range of specifications that a producer must comply with in order to access a market. Consequently, it is often difficult to conclude that it is an ERHR that is creating the problem with market entry rather than, say, a product quality specification or even difficulty in finding a local distributor. Thus, not only is it almost impossible to identify the changes in trade flows in products that need to meet certain ERHRs, but even if it were possible, it would be difficult to conclude that ERHRs are the sole or most important reason for these changes.

Identification and understanding of the impact of ERHRs on market access is further complicated by the fact that the types of problems that could arise fall into several interrelated clusters of categories that are addressed by different groups of stakeholders (e.g. international organizations, national governments, different ministries, private standard setting bodies, large buyers and NGOs) and discussed in different national and international forums. This results in imperfect problem identification and solution finding, which means that interrelated aspects of the issue cannot easily be addressed in a holistic manner.

It is also worth highlighting that there is "shared responsibility" for resolving adjustment problems to new ERHRs. Some issues need to be resolved by developing countries on their own (e.g. institutional and structural changes); for others, there is a shared responsibility, with developing countries being responsible for the actions but developed countries having some responsibility for assisting them to comply (through trade-related technical assistance and other means highlighted in TBT Article 11). There are other areas where the responsibility lies solely with developed countries (e.g. transparency, stakeholder consultations, ex-ante impact assessment, least trade-restrictiveness of the requirements).

Moreover, it should not be overlooked that government subsidies play a significant role in the adjustment process to ERHRs in various countries, notably in developed ones. As chapter three of this Review shows, producers in a number of developed countries can readily draw on a multilayer financial support mechanism that facilitates transition to and reduces the costs of certification for organic production. Such subsidy schemes are the rare exception in developing countries (the Government of Tunisia, for instance, provides partial subsidies to cover inspection and certification fees for the first five years of organic production). In short, ERHR-adjustment-related subsidies are likely to further distort market access and market prices.

Experience and case studies have demonstrated that there are a number of factors which influence how well developing-country exporters can adapt to ERHRs. Overall, it appears that if developing countries adopt a merely firefighting, rather than a strategic, approach to addressing ERHRs in their key export markets, ERHRs may well hurt international competitiveness. While resolving the problems of market access requires the participation of the importer (country, company, standards body), from a broader, market-entry perspective there are a large number of actions that governments need to take domestically to strengthen export competitiveness. That is, even in the absence of any improvement in export markets, developing countries can act internally to increase the capacity and effectiveness of institutions, infrastructures and legal frameworks, and strengthen their key industries at both the sectoral and enterprise level.

1. Strengthening technical and institutional capacity

Apart from problems related to the complexity, stringency or technical characteristics of certain ERHRs, companies in developing countries face a number of other constraints as a result of structural problems. Many find their export markets restricted, not because their exporters are unwilling to comply with ERHRs, but because of an inability to identify the requirements, access or

afford the required technology, make changes to production techniques, or demonstrate compliance in a credible way. While some of these problems relate to deficiencies at the enterprise level, many of them arise from more fundamental institutional weaknesses. Crucially, countries must start looking at ways to strengthen the institutions needed to deal with ERHRs – that is by establishing early-warning systems, enquiry points, standards bodies, specialized consultants, testing and metrology labs, and accreditation agencies – much as they seek to improve their road networks, ports and telecommunications. All of these form part of the national infrastructure that is essential for enabling companies to participate in international trade.

The fundamental importance of this institutional infrastructure is implied in the texts of the TBT and SPS Agreements, which include specific provisions on technical assistance to help developing countries upgrade their national bodies that deal with such aspects as standards, conformity assessment and accreditation. This issue is addressed in more detail below. At present, most developing countries have insufficient technical capacity to efficiently manage many kinds of standards and technical regulations, including ERHRs. Typically, essential facilities such as laboratories are short of adequately skilled staff, scientific equipment is obsolete for the required tests, and there is little, if any, systematic collection and recording of information.[29] Even when equipment and testing is available, the laboratories may not be recognized by authorities or companies in the importing country, and so tests must be commissioned from foreign laboratories. This increases the relative costs of conformity assessment for firms in developing countries. As UNCTAD and OECD case studies demonstrate, many of these constraints have obvious cumulative effects (UNCTAD, 2004b; OECD, 2002a).

This lack of national infrastructure leads to three general problems at the enterprise level. First, in those cases where a company's comparative advantage lies in maintaining low capital costs and high labour inputs, even relatively small additional investments in equipment can overstretch available short-term credit limits and result in substantial increases to marginal costs. This is especially the case for SMEs. Second, the required equipment or management expertise may not be available locally,[30] and local companies may not have the capacity to conduct international searches for suitable suppliers. Finally, even where equipment or consulting services are available locally, they are most likely to be provided by foreign firms at prices that tend to be higher than in developed countries. Thus, even when companies in developing countries are able to comply with importers' ERHRs, their costs are likely to be relatively higher than for competitors in developed countries.[31]

Where national infrastructure is inadequate, large TNCs may be able to invest in upgrading their own facilities, particularly in the case of intra-firm trade rather than direct retail trade. But where export industries are composed of a significant proportion of SMEs, the lack of financial resources prevents them from addressing critical trade-related infrastructural deficiencies. Recent research by UNCTAD and the OECD on the leather industry in several Asian countries (Bangladesh, Cambodia, China, India, the Philippines, Thailand and Viet Nam) suggests that ERHRs can actually drive industry concentration, reducing the number of small, family-owned enterprises (OECD 2002b: 31–36; and UNCTAD, 2003b). There is therefore a strong case to be made for trade for aid in a well-coordinated manner that would enable expanded capacity building. This is particularly important for LDCs and other low-income countries, which often lack the necessary technical and logistical infrastructure so vital for supporting quality assurance systems.

Given the declining levels of public expenditure in many countries, this situation is unlikely to improve in the short term.[32] In addition, although foreign assistance is essential, deep-rooted institutional problems will be difficult to overcome by technical assistance measures alone, which are more appropriate for isolated problems within an overall sound institutional setting. Developing countries need to adopt long-term strategies to improve the infrastructure needed by their companies to address ERHRs, focusing first on priority industrial sectors and key export markets. At the same time, developed countries should recognize that until this infrastructure is in place, ERHRs

will have a proportionally greater impact on the competitiveness of companies in developing countries than on those in their own jurisdictions. This implies a responsibility for developed countries to undertake all reasonable efforts to reduce the impact of ERHRs, including by governments, importing companies and, where relevant, non-governmental standards bodies.

2. Limiting trade restrictiveness of ERHRs at the design stage

Recent debates in the WTO Committee on Trade and Environment (CTE) have reiterated that an approach that mostly or exclusively focuses on technical assistance to developing countries to comply with ERHRs is insufficient. Article 12 of the TBT Agreement and Article 10 of the SPS Agreement require that Members take into account the special needs of developing countries in the preparation of mandatory ERHRs (WTO, 2004a). In accordance with Principle 11 of the Rio Declaration, "environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries."

There are a number of practical steps that can be taken to duly implement Principle 11. First, developed countries could guarantee inclusiveness and transparency in the process of ERHRs' development. This applies in particular to facilitating the participation of developing-country representatives in pre-regulation and pre-standard-setting consultations. It should include both the publishing of information in hard copy or electronic form as well as an active outreach effort to developing countries likely to be particularly affected by the trade effects of new ERHRs (also see recommendations of the next chapter in this regard). Second, ex-ante assessments of the likely trade effects on developing countries' key export interests can also go a long way towards addressing major concerns at the design stage of new ERHRs.

Pre-regulation and pre-standard-setting consultations

As regards mandatory ERHRs, a recent analysis by Earley (2004) suggests that it is arguable whether OECD countries have indeed ensured that their regulatory processes satisfy the TBT/SPS requirements for transparency and consultation. At the most general level, the obligations of the SPS and TBT Agreements are not being fully implemented in spirit, even where developed countries have fully elaborated internal regimes that impose obligations for transparency and consultation in the standard-setting process. In part, this is because the statutory framework imposing these obligations was enacted initially for the protection and democratic participation of citizens. The extension of transparency and consultation provisions to SPS and TBT obligations therefore often results in a poor 'fit' between the national administrative framework and WTO requirements. Even in the most advanced developed countries, some regulatory agencies do not consider themselves "trade agencies" and are loath to provide notification, particularly at an early stage, to trading partners. In countries where internal transparency regimes are not in place, breaches of TBT/SPS requirements are even more likely.

Some developed countries share the experience of developing countries in penetrating the regulatory jungle where obligations have been devolved to a state or sub-federal level. The transparency obligations of the WTO apply to a central government body that is primarily responsible for ensuring that sub-national government bodies adhere to WTO agreements, but there is sometimes little explicit oversight.

None of the developed countries/regions studied by Earley for UNCTAD (Canada, the European Union, Germany, Sweden and the United Kingdom) implement domestic transparency requirements in a sufficiently comprehensive way with the result that implementation of TBT/SPS requirements is incomplete. The development of better integrated policies at the national level in many developed countries may result in greater attention to responding more effectively to the

needs of outsiders that are trying to cope with regulations intended to be national in scope. Undoubtedly, there is an increasing understanding that many kinds of regulations need to be addressed in a multilateral context, and an increased formalization of administrative procedures will help in this regard.

However, more direction is needed when consultation and transparency are to be provided to importers from developing countries, who, in some cases, are as fully a part of the regulatory stakeholder base as their domestic supplier counterparts. Electronics, as amply demonstrated in the next chapter, is a case in point. The most obvious ways to facilitate developing-country involvement in pre-ERHR-setting processes is to invite comments and provide access to information resources on the Internet or to actively facilitate participation of developing-country representatives in pre-regulation-setting stakeholder consultations. Of all the countries studied, Canada, Sweden and the United Kingdom are the most active in this respect. The decision of the European Commission to hold an Internet-based consultation on its draft REACH Directive was helpful in soliciting the kinds of comments that were not received when developing the Waste Electrical and Electronic Equipment (WEEE) Directive and the Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive. The European Commission has recently also created an Internet-based "single access point" for open public consultations (generally lasting eight weeks).[33]

The results of the recent stakeholder consultations on the draft REACH system give an indication of the role pre-regulation-setting stakeholder consultations can play in addressing specific concerns. The draft proposal on REACH, which was posted for Internet consultation in mid-2003, has been thoroughly revised to cut costs and minimize bureaucracy whilst safeguarding human health and the environment. In the new impact assessment, it was estimated that the direct cost of REACH to the European chemicals industry would total some •2.3 billion over an 11-year period. This is a reduction of over •10 billion compared with the draft REACH text posted on the Internet. This reduction is due to changes such as reduced testing requirements and simplified registration procedures for low volume chemicals, exclusion of polymers from registration, and a major reduction in downstream user requirements.[34]

Finally, better interagency coordination in developed countries can also facilitate developing-country involvement in pre-ERHR-setting processes. If aid and capacity-building processes are linked to regulatory ones, a developed country can internally ensure that developing country or importing perspectives will be heard. Steps in this direction have included the placing of an ombudsman for developing countries in the Swedish Trade Ministry and the roles played by the Centre for the Promotion of Imports from Developing Countries (CBI) in the Netherlands (www.cbi.nl), the Danish Import Promotion Office for Products from Developing Countries (DIPO) (www.dipo.dk), the Open Trade Gate Sweden (www.opentradegate.se) and the European Commission's Expanding Exports Helpdesk for Developing Countries (www.export-help.cec.eu.int).

As regards pre-standard-setting consultations in the private sector, analysis shows that the perception that developing countries and their industries stand at the receiving end of these efforts is sometimes well founded. The questions that need answers, therefore, are whether existing initiatives and efforts are adequate for driving change in a sufficiently open process, and whether additional mechanisms could add value and facilitate developing- country involvement. It is possible, but not very likely, that additional best-practice guidelines on procedural aspects of the development of new voluntary ERHRs will come from the private sector, even given the existence of recently introduced normative standards for transparency, such as those of the International Social and Environmental Accreditation and Labelling Alliance (ISEAL).[35]

Additionally, it will be very difficult to effect change in the way private sector standards are created without the cooperation of private sector bodies. It is possible that if developing countries can find a larger voice in multilateral standards-setting organizations, this could play a role in

negotiating transparency and consultation with the major private sector programmes. The International Federation of Organic Agricultural Movements (IFOAM), for instance, has already been an active participant in a harmonization effort organized jointly with the Food and Agriculture Organization of the United Nations (FAO) and UNCTAD through the FAO/IFOAM/UNCTAD International Task Force on Harmonization and Equivalence in Organic Agriculture (see chapter 3 of this *Review*), and the Global Eco-labelling Network is ready to assist multilateral efforts as well as national ones.

Private sector standardization bodies that have recognized the Code of Good Practice for the Preparation, Adoption and Application of Standards in Annex III of the TBT Agreement have pledged to observe disciplines on transparency and consultation similar to those in the TBT Agreement. However, in practice this is difficult for developing-country representatives to implement, and often lack of funding prevents participation in consultations open to third parties (Henson, Preibisch and Masakure, 2001: 26).

Ex-ante assessment of the impact of new ERHRs

Ex-ante analyses of the trade impacts of new ERHRs on key exporting developing countries may be able to limit market-access problems. Such analyses could be a useful input into the pre-regulation-setting stakeholder consultations (discussed above) or in environmental policy dialogues, which the European Commission, for instance, has recently held with China and Thailand to discuss common approaches to environmental concerns and related market-access issues, including the WEEE and RoHS Directives (for more details, see WTO, 2004b: 7–8 and chapter 2 of this *Review*).

By way of illustration, the European Communities have recently introduced a "Better Regulation Package", which aims at improving regulation through improving knowledge about its impact and systematic consultations with stakeholders, including those from developing countries. The package envisages a preliminary impact assessment, and for a selected number of significant proposals, including ERHRs, a more in-depth analysis – called an extended impact assessment – of proposals that could have substantial economic, environmental or social impacts. This impact assessment should include an analysis of the potential effects on countries outside the EU, if these countries are major interested parties with regard to the regulation concerned (WTO, 2004b).

Sector-focused OECD (2004: 20) and UNCTAD studies, carried out before REACH, found only one example of a thorough ex-ante impact assessment, which concerned the European Commission's review of the impact of the Directive on azo dyes.[36] A recent UNCTAD/FIELD Stakeholder Consultation on REACH and Developing Countries referred to the extended impact assessment of the draft REACH regulation conducted by the European Commission. However, this comprehensive analytical effort did not include the external impact on developing-country exporters; it was generally believed that the impact analysis of REACH on developing countries was insufficient, and that further efforts were needed to consider its economic, social and environmental impacts in those countries. The meeting therefore recommended that such an analysis be undertaken by the European Commission, including on the use of both chemical substances and substances in articles, from an economic, environmental and social perspective (UNCTAD/FIELD, 2004: 17, 21).

3. Coordinated and comprehensive technical assistance

While technical assistance from developed countries cannot on its own solve the problems associated with the growing number and complexity of ERHRs, there is no doubt that it is needed. Indeed, a number of technical assistance and capacity-building initiatives have taken place in developing countries to facilitate the fulfilment of ERHRs in external markets and thus ease market access. These have been undertaken by international, multilateral and regional organizations, through bilateral assistance, and by the private sector and NGOs. However, only very few of these

activities are being coordinated in terms of implementation and/or shared learning. Also, few take the kind of holistic and systematic approach necessary to address the fundamental institutional development that is ultimately needed. As mentioned above, this is not entirely surprising, since most technical assistance is not well suited to institution building.

Of more concern, however, is the fact that many initiatives are reactive in nature; they tend to solve problems only after they arise. This is linked to the challenge of demonstrating a need to donors before a problem arises or is visible. But one notable exception is the technical assistance and capacity building that occurs within the framework of the Montreal Protocol to phase out production and consumption of ozone-depleting substances (ODS). These initiatives are financed through a designated Multilateral Fund. Apart from the significant size of funding support, [37] the technical assistance and capacity building aspects of the Protocol also include the funding of ozone offices at country level, which ensure a systematic and coordinated approach to ODS out-phasing,[38] including support for training, transfer of technology and building of infrastructure.[39] In recent years, as experiences with and understanding of ODS replacement have grown, it has been possible to shift from a mere reactive to a more proactive approach to technical assistance.[40]

A variety of measures could help reduce the piecemeal and uncoordinated approach that characterizes ERHR-related technical assistance. Regular exchange of information on ongoing and planned technical assistance and capacity-building activities, and some mechanism for coordinating them, would help.[41] Given its central role in the process, such coordination would need to be initiated at source and spearheaded by donor agencies. Participation of donors in relevant forums for coordination would also help. While it is often difficult to segregate trade-related technical assistance from more general development assistance, it would also be useful for donor agencies to publish registers of their trade-related projects. Some donors (most recently, for instance, the EC and Switzerland)[42] have submitted such lists to the WTO's Committees on Trade and Environment (CTE) or Technical Barriers to Trade.

The ultimate goal is a more holistic approach that combines institution building with technical assistance for infrastructure and training. The Standards and Trade Development Facility (a joint initiative addressing SPS issues involving the WTO, the World Bank, FAO, the World Organization for Animal Health and the World Health Organization (WHO)), established in mid-2002, is expected to receive longer term funding in 2005. The Facility will then be able to address longer term issues of capacity and compliance, rather than concentrating exclusively on short-term or "firefighting" projects.[43] At present, no such mechanism or facility exists or has even been discussed for TBT-related measures.

Nevertheless, it will be impossible to address institutional development issues unless developing countries themselves take a more proactive and strategic approach. That will require some baseline efforts to analyse adverse trade effects of ERHRs in key export markets, improve information management and the level of awareness, and develop versatile adjustment approaches that focus on maintaining or improving export competitiveness. Development assistance agencies should not only support, but also actively participate in, these strategic planning initiatives so that a common understanding of needs and opportunities is reached. Eventually, trade-related technical assistance should be integrated into all long-term development planning processes, such as poverty reduction strategy papers (PRSPs).

Any realistic assessment of what it will take to identify priorities and resolve long-term, ERHR-related capacity issues will immediately conclude that discussions on these issues need to involve an extremely broad range of stakeholders. As will be discussed later, this should not only include national bodies interested in reducing the negative trade-related impacts, but also those interested in maximizing the positive (catalytic) environmental and related health impacts. Some actions, such as notifications of technical regulations and standards, will necessarily have to be taken through the relevant WTO Committees (TBT, SPS and CTE). Many others, however, will involve

groups that have no regular connection with the WTO at all, such as negotiations on mutual recognition and technical equivalence, consultations with developing countries in regulation and standards setting, and helping developing countries to adjust.

The text of the WTO Agreements themselves underlines the need to broaden discussions on ERHRs beyond the traditional WTO community. Article 11 of the TBT Agreement and Article 9 of the SPS Agreement include provisions on trade-related technical assistance. Strictly speaking, however, these provisions are not mandatory as they have been linked to phrases such as "under mutually agreed terms" (Art. 11.2. of the TBT Agreement), "take reasonable measures as may be available to them" (Art. 11.3. and 11.4. of the TBT Agreement), "to facilitate the provision of technical assistance" (Art. 9.1. of the SPS Agreement) or "shall consider providing such technical assistance" (Art. 9.2. of the SPS Agreement). Furthermore, while the national trade ministries that negotiated the WTO Agreements made the promise of technical assistance, it is the national development ministries that control most of the technical assistance budgets. Because development assistance budgets were not increased to accommodate the additional commitments made in the TBT and SPS Agreements, trade-related technical assistance must compete with other priorities, such as education, health and other public services.[44] Thus without close coordination with donor agencies, an extremely important provision cannot possibly be implemented. As discussed in more detail below, there are also many other important provisions in the TBT and SPS Agreements that cannot be implemented by trade ministries alone. The discussion should therefore be broadened to include many other players.

It would also be helpful for the discussions in the WTO on technical cooperation/capacity-building activities as well as special and differential (S&D) treatment to address specific concerns and link them to notifications. Since October 2002, for instance, there has been a debate in the SPS Committee on a Canadian proposal to enhance transparency of S&D treatment within the SPS Agreement (see WTO document G/SPS/W/132/Rev.3). The proposal envisaged the identification of S&D treatment in comments of developing countries on notifications, and examination by the notifying Member as to whether and how the identified problems could best be addressed taking into account the special needs of the interested exporting developing-country Member. On 27 October 2004, the SPS Committee took a decision, which adopted, in principle, the Canadian proposal (WTO document G/SPS/33).

4. ERHRs and the limitations of the WTO Agreements

ERHRs are, to a certain degree, "regulated" by the provisions in the WTO's TBT and SPS Agreements, which include provisions on the preparation, adoption and application of technical regulations, standards and conformity assessment procedures. While many of the potential impacts of ERHRs are addressed and would be mitigated by full implementation of these Agreements, three categories of problems restrict their degree of effectiveness.

First, as discussed in detail above, developing countries cannot take advantage of their rights under these Agreements without a minimum level of institutional capacity, which currently does not exist in many countries. Second, trade ministries cannot resolve all problems related to standards and technical regulations through the drafting of good rules alone. Furthermore, some of the provisions in the TBT and SPS Agreements are relatively meaningless without the active participation and commitment of parties that are external to most trade-policy debates. Third, and related to this, voluntary ERHRs applied by the private sector and NGOs are sometimes guided by WTO disciplines, but WTO forums are limited in their ability to directly address specific problems related to preparing, setting and implementing such standards.

Justification, legitimacy and the role of science

Article 2.2 of the TBT Agreement contains a non-exhaustive list of *legitimate* objectives for the pursuit of which technical regulations can be imposed. This list includes the protection of human

health and safety, animal life and health and the environment. Article 2.2 also stipulates that technical regulations should not be more trade restrictive than necessary to achieve these policy goals. This language is consistent with that in Article XX of the GATT 1994, on general exceptions (for more detail, see box 2 below). Finally, the TBT Agreement establishes a presumption that technical regulations based on international standards are least trade-restrictive.[45]

Other than the "not more trade-restrictive than necessary" obligations in the TBT Agreement, there are no specific benchmarks or criteria in that Agreement for justifying the need for ERHRs per se. In particular, a risk assessment is not required before an ERHR regulation is enacted, and no scientific justification for the imposition of a measure needs to be given at any time other than in a dispute resolution proceeding.[46] This is in contrast to the SPS Agreement, Article 5.1 of which requires a prior risk assessment to provide evidence of the *necessity* of the measure taken for food safety. Furthermore, Article 5.7 of the SPS Agreement stipulates that in cases where relevant scientific evidence is insufficient, a country may provisionally adopt SPS measures, but then must, within a reasonable period of time, seek additional information for a more objective assessment of the risk, and also review its necessity.

This difference between how the TBT and SPS Agreements approach legitimacy and necessity has caused dissatisfaction among some developing countries. They assert that the "legitimate objective" notion of the TBT Agreement is too vague, and leads to both the imposition of unjustified ERHRs and to the large degree of variation that exists in the levels of protection accorded in

Box 2. Some general conclusions from the WTO dispute settlement practice related to GATT Article XX

Article XX contains limited exceptions to obligations under certain other provisions of the GATT 1994, not positive rules establishing obligations in themselves. Therefore, a Party invoking an exception under Article XX has to prove first, that the inconsistent measure has a provisional justification under one of the explicit exceptions figuring in Article XX; and second, that further appraisal of the same is required under the introductory clause of Article XX.

There has been some evolution in the interpretation of the necessity requirement of Article XX (b) - protection of human, animal or plant life or health - and (d) - securing compliance with laws or regulations that are not inconsistent with the provisions of the GATT 1994. The interpretation has evolved from a least trade-restrictive approach to a less trade-restrictive one, supplemented with a proportionality test (i.e. a process of weighing and balancing a series of factors).

The chapeau of Article XX contains three standards to be tested: (i) arbitrary discrimination, (ii) unjustifiable discrimination, and (iii) a disguised restriction on international trade. Several panels confirmed that it was the application of the measure, and not the measure itself, that needed to be examined. With regard to the arbitrary and unjustifiable discrimination of a measure, panels have accorded special attention to flexibility in the application of the concerned measure.[a] The more rigid and inflexible the application, the greater the likelihood that the measure will be regarded as arbitrary and unjustifiable. In order to determine whether a measure is a disguised restriction on trade, three criteria have been progressively introduced by panels and the Appellate Body: (i) the publicity test; (ii) the consideration of whether the application of a measure also amounts to arbitrary or unjustifiable discrimination, and (iii) the examination of the design and architecture of the measure at issue.

Source: Compiled from WTO document WT/CTE/W/203 of 8 March 2002.

[a] The shrimp-turtle case (involving Malaysia, India, Pakistan and Thailand versus the United States in 1997-1998) for instance, suggests two conclusions on the extraterritorial application of an environmental regulation. First, such application is permissible if it is implemented in the context of an international agreement such as an MEA. Second, such measures need to be applied in a transparent, predictable and uniform way to all WTO Members.

ERHRs with similar objectives in different countries. Indeed, it is not rare to find diverging levels of stringency in an ERHR even among EU member States, for example in the case of packaging regulations or in systems for management of waste electrical and electronic equipment.

There have been various proposals to address this problem, including:

- Introducing into the TBT Agreement a requirement to provide information that justifies the measure, and linking it to a risk assessment in accordance with methodologies developed by relevant international organizations. This would be analogous to, but perhaps less onerous than, SPS Article 5.1;
- Establishing a panel of experts to review the scientific justification of a particular ERHR as soon as it is notified to the WTO's TBT and SPS Committees (Xia, 2003); and
- Developing a mediation procedure or an ombudsman process to examine potential conflicts as an additional step before dispute settlement action is launched. The creation of such a procedural step could address concerns about any potential abuse of TBT measures, in particular when the problem is related to capacity – not willingness – to comply.

These proposals are controversial, and there are conflicting views as to whether they are desirable, even among the authors of this paper. The tension lies in the balance between minimizing the scope of abuse in the use of ERHRs versus providing maximum flexibility for governments to regulate in environment-related areas. In the WTO, this tension is manifest in the reluctance of many Members to reopen the TBT agreement. There is also concern that a justification requirement or a review panel would serve to challenge regulatory attempts to limit environmental harm in a preventive manner.

Notifications and transparency

Without some degree of prior warning that an ERHR is going to be applied, it is almost impossible for any company to manage the transition and to avoid losing market share, even if only temporarily. As a result, both the TBT and SPS Agreements include provisions requiring prior notification and transparency in the development of new technical regulations. New mandatory ERHRs must be notified to the WTO secretariat or to the ISONet,[47] which then communicates the notification to other countries' TBT or SPS enquiry points. However, without an effective chain of communication flowing at the national level, from the importing country's enquiry point to the actual producers themselves, the information cannot be used. Without an effective early-warning system, a capable and well-resourced enquiry point, and effective industry associations that are in contact with their membership, the TBT and SPS Agreements' notification provisions cannot achieve much on their own.[48] In countries where most producers are SMEs, or where there may be a basic lack of IT infrastructure, this problem is magnified. In addition, current notification requirements do not distinguish between relatively simple and much more complex ERHRs; they allow the same notice period for a change to the level of an existing requirement as for complicated and far-reaching ERHRs like the WEEE and RoHS Directives,[49] which would require a substantially longer transition and implementation period.[50] To make such tools operational, specific criteria would need to be developed which would distinguish complex from simple ERHRs that fall under the TBT and SPS Agreements.

Another problem is that the present format of notifications is not very user-friendly for the real target group – the industries that have to apply the requirements. The notification form provides little information, and often refers to legal texts that are difficult for non-lawyers to understand.[51]

As noted above, voluntary standards and supply-chain requirements are becoming an increasingly important source of ERHRs. Because they can entail significant changes in production processes, it is also important that they be notified as far in advance as possible. However, even though the Code of Good Practice for the Preparation, Adoption and Application of Standards, which forms Annex 3 of the TBT Agreement, includes text that relates to non-governmental bodies, these

provisions are more akin to "guidance" than to "requirements". Since the WTO Agreements are only binding on States, there are no mechanisms for ensuring compliance by non-governmental bodies. While governments are obliged to take "reasonable measures" to ensure compliance by bodies within their territories under Article 2 of the TBT Agreement, many governments have expressed reluctance to intervene in the affairs of independent non-governmental bodies located within their jurisdictions. Moreover, it has been reported that some important non-governmental bodies that develop ERHRs are unsure of whether they may use the WTO's notification procedures, even though there is no other obvious alternative mechanism for communicating their ERHRs.

Of course, prior warning to enable a smooth transition and implementation of the ERHR is not the only purpose of the notification provisions. Without this information, producers in developing countries could not possibly comment on the development of ERHRs that may have an impact on their market access. Thus, even though the TBT and SPS Agreements, in theory, empower developing countries to influence the development of new ERHRs, in practice, technical and capacity constraints often render these provisions ineffective for many developing countries.[52]

International standards and technical equivalence

Article 2.4 of the TBT Agreement states that "where technical regulations are required and relevant international standards exist or their completion is imminent, Members shall use them, or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems."

Against this background, one of the implicit objectives of the TBT Agreement is the harmonization[53] of technical regulations and standards. Harmonization should not be narrowly interpreted as achieving identical standards. Rather, it should be seen as a process that uses different tools for achieving various degrees of commonality, such as through mutual recognition,[54] technical equivalence or benchmarking[55] and international standards.

Undue attention has been given to the role of international standards in the ERHR arena. This is despite the fact that, as a recent OECD study concludes, "in many of the most notable cases where environmental requirements have created market-access problems for developing-country exporters, an international standard did not exist. It remains the case today that there are many regulations, especially relating to chemical residues in consumer items (such as leather and fabrics), that are not based on any international standard – usually because only a small group of countries had decided to regulate that substance."(OECD, 2004).

But even where international standards do exist, they are often developed by large companies in developed countries.[56] This has two important implications: (i) the kinds of international standards that are developed are often those that respond to developed-country priorities; and (ii) even where international standards respond to developing-country needs, their specifications are more likely to be suited to large, capital-rich companies rather than to labour-intensive SMEs (Rotherham, 2003). These two points are particularly important when the standard has implications for production or purchasing, whether product-related or not. As noted earlier, many of the sectors where developing countries maintain a comparative advantage are characterized by high levels of SME involvement.

Although the TBT Committee has long highlighted the need to increase developing-country participation in international standardization, little progress has been made. Indeed, all that the Committee can do is to encourage countries to participate and encourage other countries to help finance this participation.[57] Without working more closely with the international standards bodies, the WTO cannot possibly address this problem any more than it already has. Moreover, the focus

on increasing *participation* is misplaced; what is more important is to increase developing-country influence. In addition, given the fundamental differences between the contexts in which small and large companies operate, it might be more important to increase the participation and influence of SMEs in international standardization. But a fundamental mistake too often made is to ignore the fact that technical equivalence itself could be a way of increasing developing-country influence over the standards to which they are expected to adhere.

Conceptually, there are two elements to the technical equivalence issue. First, and as outlined above, there is a need for some harmonization procedure in the absence of international standards. Second, some environmental and health issues have to be addressed in a context-relevant manner. It is therefore unfeasible to think about international standards that could set common international requirements appropriate for all countries. This is particularly the case with the most controversial ERHRs – measures based on non-product-related processes and production methods – which address the impacts of production and must therefore be appropriate to the local social, economic and environmental context. The inevitable conclusion is that technical equivalence is the only way to harmonize some types of ERHRs.

Article 2.7 of the TBT Agreement encourages members to accept "as equivalent technical regulations of other Members, even if these regulations differ from their own, provided they are satisfied that these regulations adequately fulfil the objectives of their own regulations." To date, there has been little effort and success in negotiating technical equivalence agreements. Most existing agreements are of a bilateral nature, between countries of a comparable level of economic development. There are only a few multilateral approaches, two of which are in the area of organic agriculture: the Codex Alimentarius international standard on organic agriculture, and the IFOAM's Basic Standards.[58]

It has been suggested that it is possible to create an international framework to facilitate the development of technical equivalence agreements. Along with helping to implement Article 2.7 of the TBT Agreement, this may also be an effective way of increasing the influence of developing countries over those standards and regulations, the effectiveness or appropriateness of which depends on fundamental climatic or geographical factors or fundamental technological problems. Against this background, in February 2003 the FAO, UNCTAD and IFOAM jointly created the International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF-Organic). The ITF will review the trade and production implications of lack of harmonization and equivalence of standards, and then devise short- and long-term measures that can foster harmonization and equivalence in standards-setting, conformity assessment and accreditation (for more elaborate information and analysis, see the third chapter of this Review on organic agriculture).[59] Initial analysis for the ITF-Organic confirms that additional direct and indirect costs for multiple certifications against an array of public and private standards are significant (Wynen, 2004).

5. Anticipating change

To date, many developing-country exporters have only been able to react to, not anticipate, new ERHRs. Unless they are able to develop a proactive approach to the assessment of the costs, benefits and capacity needs associated with ERHRs in key export markets, they will not be able to harness a range of associated environmental and other benefits and reduce adjustment costs, either at the country or enterprise level. In the absence of a proactive approach, attention will continue to be focused on preventing negative (mostly trade) impacts, rather than also maximizing the positive (catalytic) effects associated with environmental protection, material-efficiency gains, occupational safety and public health.[60]

A number of the mandatory ERHRs being put in place in developed countries could be seen as part of an attempt to internalize environmental costs. The theory is that altered factor prices should influence investment and consumption decisions and, as a result, reduce pollution and increase re-

source efficiency. In analysing the impact of such ERHRs, it is important for developing countries to recognize the benefits for sustainable development of the national economy, for instance in terms of enhanced resource efficiency, lower pollution intensity, higher occupational safety and better public health, even if these are not always accorded the same priority in developing countries as in developed ones.

Deriving the benefits of ERHRs, however, is not just about efficient use of resources; rather, it is the reinforcement of the cumulative gains of local dynamic growth forces, notably labour, technology, public health and the environment. Unless this dynamic effect of adjustment to new ERHRs is considered, adjustment costs may be overestimated. The reinforcement of cumulative gains of national growth forces might go beyond sector-specific adjustment measures, and necessitate close linkages between capital accumulation, technological progress and structural change as a basis for rapid and sustained productivity growth. However, the implementation of such an approach will require coherence in terms of being accompanied by measures to secure (i) access to and effective use of environmentally sound technology; (ii) availability of skilled labour; and (iii) provision of adequate trade-related technical assistance. That such coherence exists in developing countries and that the necessary support is being provided is currently the exception rather than the rule.

There are a number of reasons why the attitude towards ERHRs might vary among countries: environmental absorptive capacities may vary; different risk perceptions might favour risk management over risk avoidance; or lower income levels may not create a sufficiently large market for products that meet specific ERHRs (unless the prices of such products are reduced through the implementation of stricter ERHRs). Moreover, ERHRs in developed countries may not, or may only partly, address environmental or environmental-health problems that are treated as priorities in many developing countries, such as safe water and sanitation. If the balance of priorities implicit in foreign ERHRs is not consistent with domestic policies, then investments in compliance alone will not promote national sustainable development policy goals.

A formidable challenge for developing countries is to avoid a situation in which investments in public institutional capacity and regulation setting as well as in the infrastructure needed to comply with ERHRs in export markets, crowds out investment in much-needed social services or other infrastructure such as safe water supply and sanitation.[61]

Only a strategic, proactive and integrated approach in developing countries to meeting constantly changing ERHRs in key export markets can assure that cumulative gains from and close linkages between capital accumulation, technological progress and structural change are implemented in a manner that is consistent with development objectives. This will require more emphasis on: (i) systematic gathering, analysis and dissemination of information on new ERHRs; (ii) the development of well-planned adjustment strategies, with an adequate involvement of all key stakeholders; and (iii) the crafting of effective public–private partnerships for implementing adjustment measures.[62]

Proactive adjustment policies will also have to pay special attention to adjustment problems and suitable approaches for SMEs. New ERHRs in export markets are particularly difficult for SMEs to meet. Consequently, they increasingly tend to be excluded from supply chains or "outgrower" networks.[63] As SMEs play a key role in many sectors of special export interest to developing countries (such as textiles and clothing, leather and footwear, horticulture, and even electronics), the major policy challenge for developing-country governments is to facilitate and support the adjustment process of SMEs without perpetuating their backwardness.

6. ERHRs and their impact on competitiveness

To understand the relationship between ERHRs and competitiveness, it is necessary to have a clear idea of the concept of competitiveness. This can contribute to an understanding of the distribution of wealth, both nationally and internationally, if it is recognized that (i) it can be applied at both

the enterprise and country level, (ii) when applied at the enterprise level, it relates to profits or market shares; (iii) when applied at the country level, it relates to both national income and international trade performance, particularly in relation to specific industrial sectors that are important in terms of, for instance, employment or productivity and growth potential, and (iv) not all countries can simultaneously improve the competitiveness of their firms or sectors relative to other countries, but all countries can simultaneously raise productivity and wages to improve their overall economic welfare without altering their relative competitive positions.[64] Even if compliance with new ERHRs in external markets does not lead to relative international competitiveness gains, or might even lead to temporary competitiveness losses, this does not rule out the fact that compliance leads to (absolute) gains in national productivity and economic welfare.

The core requirement is to analyse under what conditions technological and managerial upgrading, and resulting productivity gains at the enterprise level, lead to structural change at the national level, and enable an upgrading of the technology content and product quality of a country's exports. For this it is necessary to distinguish between short- and long-term effects of new ERHRs on competitiveness, and to recognize that adjustment is a dynamic process.

"Environmental friendliness" has become an integral aspect of perceptions of a product, in addition to other more traditional "quality" characteristics, such as durability, reliability, colour or taste, in an increasing number of product markets. This is partly a response to consumer concerns on environmental issues, but it is also caused by a deliberate drive by some companies to develop a specific pro-environment corporate image or eco-positioning for their products. NGO campaigns and labelling initiatives are contributing to this trend. Governments are also enacting legislation on ERHRs to create markets for environmentally preferable, or less harmful, products in an effort to level the competitive playing field for producers, notably in some very environment-sensitive sectors, such as chemicals, metals, packaging material or energy. As a result, more and more environmental features are graduating from aiming at niche markets to being mainstreamed by large companies or supermarkets.[65]

ERHRs are also increasingly becoming versatile tools of companies as they seek to gain or temporarily maintain a competitive edge over rivals. Eco-positioning of products is a growing trend even outside the category of resource- or material-intensive and environmentally sensitive products. Pace-setting companies tend to impose their ERHRs on rivals, both nationally and internationally, or attempt to set industry standards that are similar to their proprietary ERHRs.

As mentioned above, more stringent ERHRs demanded in external markets may generate economic, environmental and health benefits and more efficient use of resources at the national level in developing countries. However, they may also adversely affect competitiveness at the sector or enterprise level. Whereas, on average, such effects may be modest, in some sectors, particularly in pollution-intensive industries, compliance costs can be significant.[66] That said, even where compliance costs appear significant in a static analysis, a dynamic analysis may show lower costs, since incentives for innovation and the use of "clean technologies" may result in cost savings over the long term (Porter, 1990; Porter and van der Linde, 1995). This would suggest that trade effects could be small. Win-win situations could arise where increased resource efficiency can be achieved or where price premiums can be obtained.[67]

A number of other issues have a bearing on the impact of ERHRs on competitiveness. First, ERHRs are very prominent in a number of sectors where developing countries have become particularly competitive, such as fishery[68] and forestry products,[69] leather,[70] textiles[71] and certain consumer products.[72] Second, SMEs, which may find it relatively more difficult to respond to stringent environmental requirements, often play an important role in these sectors.[73] Third, many developing countries sell standardized, mass-produced goods at low prices, for which new ERHR-induced cost increases may drastically reduce profit margins but not necessarily competitiveness if all or most producers are affected by the new requirements. A study on Brazil points out that

product differentiation is more difficult in the case of homogeneous products, and producers generally find it difficult to recover the increased costs required for environmental improvements through price premiums (De Motta Veiga, Resis Castilho and Ferraz Filho, 1999).

In addition, compliance with certain environmental regulations and standards may require specific technologies, which may be protected by intellectual property rights.[74] Standards compliance may therefore require mechanisms or incentives for the dissemination of environmentally sound technologies (ESTs).

7. Summary: Coping with ERHRs

Developing countries need to adopt a more proactive and strategic policy approach to effectively and efficiently comply with ERHRs as part of a "shared responsibility" between developed and developing countries. In anticipation of more stringent and wider reaching ERHRs, it is important for developing countries to harness the sustainable development benefits for the national economy that can be derived from meeting ERHRs. Such benefits take the form of enhanced resource efficiency, lower pollution intensity, higher occupational safety and better public health, which could help raise productivity and welfare gains. Many developing countries have the political will to comply with ERHRs in key export markets, but often are prevented from doing so because of serious technical problems and fundamental institutional weaknesses. These need to be overcome with assistance from developed-country partners.

Undesirable impacts of new ERHRs on trade, economic, social and environmental conditions in exporting developing countries can be limited through early and effective involvement of developing-country representatives in pre-regulation and pre-standards-setting consultations, as well as in ex-ante impact assessments that include the specific effects of new ERHRs on developing countries. Informed by the latter, well-coordinated and comprehensive technical assistance can overcome specific capacity problems in exporting developing countries. Such measures can also significantly reduce adjustment costs in developing countries. Evidence suggests, however, that the involvement of developing-country representatives in consultations at the design stage of ERHRs and the preparation of ex-ante assessments of the impact of new ERHRs on developing countries are the exception rather than the rule. Moreover, there tends to be mainly a piecemeal approach towards trade-related technical assistance and capacity building for developing countries, and it is mostly reactive in nature – solving problems only after they arise. There is therefore a strong case for coordinated aid for trade and expanded capacity building in this area.

To a certain extent, ERHRs are subject to disciplines of the WTO's TBT and SPS Agreements. Apart from the fact that the disciplines of the TBT Agreement on justification and legitimacy related to ERHRs are not very strong, most developing countries cannot effectively exercise their rights because they lack the requisite institutional capacity. What is more, many problems related to new ERHRs cannot be addressed through WTO rules. Addressing such problems would require the active cooperation of various stakeholders who are unable to participate in most trade-policy debates. The majority of current ERHRs are voluntary in nature and are applied by the private sector and NGOs. They are sometimes guided by WTO disciplines, but the WTO is not able to directly address specific problems arising in their preparation, setting and implementation.

Generally, a more holistic approach to ERHRS and market access is required that systematically addresses policy issues and capacity constraints at the WTO, at the international level outside the WTO and at the national level in developing countries. The table below highlights some of the key issues in this regard.

Box 3. Policy and capacity issues at various intervention levels[a]

At WTO level

Policy Issues	Capacity Issues
Justification and legitimacy of ERHRs and the role of science under WTO rules.	WTO as a source of information on ERHRs.
Effective use of existing WTO mechanisms to limit undesirable impacts: • notification discussions; • monitoring implementation; • using S&D provisions; and • using dispute settlement.	Operationalizing and fully benefiting from TBT and SPS inquiry points.
Review of good regulatory practice and transparency procedures[b] (e.g. information on and possibility for participating in pre-regulation setting consultations).	Active participation in pre-regulation setting consultations.
Coherent and better coordinated trade-related technical assistance targeting mandatory ERHRs. On request, mandatory technical assistance to other WTO Members, if a WTO Member implements a regulation that is stricter than existing international standards.	

At international level, outside the WTO

Policy Issues	Capacity Issues
Lack of international standards, harmonization or equivalence of national standards, and mutual recognition.	Information gathering and dissemination.
Avoiding a situation in which voluntary ERHRs become significant TBTs and market-entry hurdles (by dealing with voluntary ERHRs in an intergovernmental setting).	Capacity to review trends in ERHRs in international markets.
Obtaining permission from standard setters to participate in standard-setting consultations.	Active participation in pre-standard setting consultations.
Coherent and better coordinated trade-related technical assistance targeting voluntary ERHRs.	

At national level in developing countries

Policy Issues	Capacity Issues
Proactive policies to harness developmental gains of ERHRs and boost competitiveness.	Enhance response and supply capacity.
Forming public–private partnerships.	Make efforts or assist with information management and analysis of new ERHRs.
Use of publicly supported eco-labelling schemes.	Improve technical infrastructure, notably monitoring and testing equipment.
Special attention to adjustment needs of SMEs.	Use (voluntary) eco-labelling and environmental management schemes.

[a] The difference between policy and capacity issues at the WTO level is not entirely clear-cut. The desire to tighten disciplines on the implementation of some specific TBT and SPS provisions might lead to policy decisions (e.g. on seeking or assuring the active participation of developing-country exporters that might be particularly affected by a specific environmental/health requirement in pre-regulation-setting consultations) that address or overcome (fully or partly) lack of capacity.

[b] The Third Triennial Review of the Operation and Implementation of the TBT Agreement (WTO document G/TBT/13 of 11 November 2003) has made a number of recommendations on good regulatory practice and on enhancing transparency procedures.

D. UNCTAD's Consultative Task Force on environmental requirements and market access for developing countries

In the light of the analysis above and its consequent conclusions, what can UNCTAD do to help developing countries become more proactive in adjusting to ERHRs in key export markets in a manner that is consistent with their development objectives and with a view to increasing their market shares?

Following an Expert Meeting on Environmental Requirements and International Trade in October 2002, UNCTAD's Commission on Trade in Goods and Services, and Commodities, at its seventh session in February 2003, recommended that the secretariat "explore the possibility of creating a consultative group on environmental requirements and international trade, which should closely coordinate and collaborate with relevant work and initiatives in other bodies and involve the private sector, as a project-based activity."[75] The UNCTAD secretariat has conducted several exploratory activities since February 2003, and at UNCTAD XI in June 2004 it launched the Consultative Task Force (CTF) on Environmental Requirements and Market Access for Developing Countries.[76]

The CTF is an open-ended, project-funded multi-stakeholder forum comprising representatives of governments, the private sector, NGOs, international organizations and academia. It aims to assist developing countries in analysing key trends of ERHRs in export markets. It will enable the exchange of national experiences on proactive approaches to meeting these ERHRs with a view to maintaining market access, harnessing development gains and safeguarding social welfare. CTF activities will analyse and discuss ways of overcoming specific developing-country challenges regarding the development and implementation of, as well as adjustment to, ERHRs.[77]

The CTF has been created and designed to address a number of the problems outlined in this paper. Its added value is that it will (i) link policy and capacity-constraint issues with the aim of developing a more holistic and development-oriented approach on environmental requirements and market access; (ii) link discussions in the WTO, notably on paragraph 32(i) of the Doha Ministerial Declaration (i.e. on environmental requirements and market access), with other relevant debates at the international and national level; (iii) provide a formal exchange mechanism between all stakeholders for analysis and discussion, including in the area of voluntary ERHRs set by the private sector and NGOs; (iv) draw into the discussion stakeholders normally not involved in WTO debates; and (v) allow regular exchange of information among agencies and initiatives that provide technical and capacity-building assistance in fields relevant to CTF discussions.

Like other initiatives (e.g. the Sustainable Trade and Innovation Center), CTF activities will supplement (notably based on sector-focused work), not duplicate, discussions on ERHRs in the WTO. By including stakeholders normally not involved in WTO debates and dealing with voluntary ERHRs more systematically in an intergovernmental setting, it can play a particularly useful role feeding findings and conclusions of relevant CTF activities into the WTO process.

The CTF will provide support in four areas: analytical, policy dialogue, information exchange, and technical assistance. Its activities will be closely coordinated with all concerned stakeholders. The CTF dialogue will be based on the following specific activities:

- Reviewing sector-specific experiences in the preparation, adoption and implementation of regulations and standards, and related examination of possible trade and developmental impacts for developing countries;
- Exchanging national experiences on the development of holistic, proactive strategies in developing countries that effectively respond to ERHRs in key export markets; improving access to and the dissemination of information on ERHRs, including private sector requirements; and
- Giving guidance on further analytical and practical work on the interface of ERHRs and

market access using a more systematic and holistic approach, and promoting a regular exchange of information and enhanced dialogue among international organizations, bilateral donors, private sector associations, NGOs and academia on those of their activities that are relevant for the CTF.

Under its umbrella, the CTF may consider launching some specific, well-defined and time-limited project activities, the results of which will aid the substantive debate in the CTF. At its first substantive meeting in November 2004, the CTF agreed to focus in the coming year on two sector-specific subjects: (i) examining and disseminating the national experiences of China, Malaysia, the Philippines and Thailand on adjustment strategies to ERHRs for electrical and electronic equipment in overseas markets; and (ii) exploring national or subregional codes of good agricultural practice for horticultural exports ultimately benchmarked to EurepGAP for Ghana, Kenya, and Uganda in Africa; Malaysia, Thailand, the Philippines and Viet Nam in Asia; and Argentina, Brazil, Chile, and Costa Rica in Latin America. As regards studying the feasibility of better linking existing international information systems on environmental requirements and improving the collection of and access to information on voluntary requirements set by the private sector or NGOs, a CTF working group will further explore the shape of a suitable platform (most likely a "portal") for guiding users on and facilitating access to existing market-intelligence systems.[78] The CTF will regularly review the effectiveness of project activities and decide on their continuation or termination, or on a change in its course of action.

E. Conclusions

ERHRs are a growing and important area of regulatory and standard-setting activity. Whether in the form of government regulations, private sector supply chains or non-governmental standard and certification schemes, ERHRs present opportunities and challenges for developing-country exporters. This paper has sought to demonstrate that those developing new ERHRs can do much to minimize their adverse effects by ensuring a transparent and consultative process with the concerned parties. Moreover, through better coordination among the actors – including governments, international organizations, NGOs and developing-country exporters – and a more systemic approach to the identification of potential hurdles and good practices, it is possible to move from the prevailing firefighting approach to a more anticipatory and proactive approach in adjusting to new ERHRs. In response to environmental degradation, ERHRs can function as important catalysts for greater environmental sustainability. This can be achieved only if practitioners and policy-makers adopt a more systematic and focused approach towards them and ensure that they are not misused for trade protection purposes. Ultimately, however, the onus of responsibility is on companies and governments in developing countries; no amount of external leadership, actions or assistance can substitute for domestic awareness, commitment and cooperation.

Too many hopes are currently pinned on WTO rules and disciplines for limiting the trade-restrictiveness of ERHRs. Apart from the fact that the disciplines of the TBT Agreement on justification, legitimacy and the role of science related to ERHRs are not very strong, most developing countries lack the institutional capacity to effectively defend their rights. Moreover, many problems related to new ERHRs cannot be dealt with by WTO rules. In many cases, they cannot even be resolved through trade policy alone; they require complementary industrial policy initiatives as well. Addressing such problems therefore requires active cooperation by stakeholders that are not included in most trade policy debates. The majority of currently applied ERHRs are voluntary in nature and are applied by the private sector and non-governmental bodies. They are sometimes guided by WTO disciplines, but not all WTO Members have imposed these requirements on the non-governmental bodies, industry associations and companies operating in their jurisdictions. The impact of WTO rules to address specific problems arising in the preparation, setting and implementation of many types of ERHRs has therefore been limited.

UNCTAD's new Consultative Task Force on Environmental Requirements and Market Access for Developing Countries is a step in the direction of a more holistic, development-oriented and

multi-stakeholder-embracing approach. In particular, it includes voluntary ERHRs and their advocates – the private sector and NGOs – in analysis and discussions, and provides a formal exchange mechanism between these stakeholders and governments. By working together these different stakeholders can find ways to ensure that the transition to compliance with ERHRs creates as few unintended adverse trade-related impacts as possible while maximizing the benefits for sustainable development.

NOTES

1 For instance, between 1990 and 2001, this share increased from 12 to 16 per cent (*UNCTAD Handbook of Statistics*, various issues).

2 This concerns not only the nature of the ERHRs, but, as will be seen later, also procedural issues, such as the ways in which they are prepared, adopted and implemented.

3 In the context of the Environmental Database, the WTO secretariat has taken the view that only some of the SPS measures are directly related to the environment, and that most measures for environmental protection are addressed by the TBT Agreement or Article XX of the General Agreement on Tariffs and Trade (GATT).

4 See also UNCTAD, Environmental requirements and international trade (TD/B/COM.1/19.2), Geneva 2002, accessible at: www.unctad.org.

5 These are MEAs that contain trade measures. However, there are also MEAs that do not have trade measures, but may have significant trade implications: for example, the United Nations Framework Convention on Climate Change encourages energy efficiency measures and a transition to renewable and low greenhouse-gas-emitting energy sources.

6 Whereas in the early 1990s, about 40 environment-related TBT notifications were submitted, in 2002 this figured jumped to 114. WTO, WT/CTE/EDB/2, Environmental Database for 2002. The Environmental Database has been supplemented by the Central Registry of Notifications that is accessible through the WTO website. Part of the trend may be artificial as the total number of notifications dramatically changes following reviews of the TBT Agreement.

7 See, for example, www.olis.oecd.org/olis/1998doc.nsf/c16431e1b3f24c0ac12569fa005d1d99/c125692700622425c12569a40038da6c/$FILE/04E95110.DOC.

8 Japan, for instance, has recently introduced stringent MRLs on various horticultural products of key export interest to developing countries. For example, Japan drastically decreased the MRL of *chlorpyrifos*, a pesticide used in mango production, which is now 10 to 20 times stricter than comparable MRLs in other developed-country markets (for more information, see Amores, 2004).

9 For more information, see UNCTAD, 2005.

10 Chemicals subject to the REACH system, for instance, contribute more than 30 per cent of the value of the following manufactured products: paints, medicines, cleaning compounds, cosmetics and toiletries, tyres, photo materials and equipment, carpets and rugs, CDs and tapes, curtains and drapes, boots and athletic shoes, eyeglasses and contact lenses, batteries, upholstered furniture, kitchen sinks and plumbing fixtures, medical supplies, and agricultural products (International Council of Chemical Associations, Chemicals and the Doha Round, 2004).

11 For more information on REACH and developing countries, see *Report of the Stakeholder Dialogue on REACH and Developing Countries*. The dialogue was organized jointly by UNCTAD and the Foundation for International Environmental Law and Development (FIELD), in Brussels, 28-29 October 2004, accessible at: www.unctad.org/trade_env/test1/meetings/brussels2.htm.

12 Whether risk avoidance should be part of or distinguished from risk management is an open question.

13 It is estimated that supermarkets in Latin America buy 2.5 times more fruit and vegetables from local producers than is exported by these countries to international markets (Reardon T, et al., 2003).

14 Under EurepGAP, for instance, growers or marketing organizations can implement a different management system. Such national or regional management schemes must, however, be benchmarked to the EurepGAP protocols to ensure that their standards will yield equivalent outcomes. With regard to systems in developing countries, EurepGAP has recognized one system, the ChileGAP scheme for fresh fruit and vegetables grown in Chile for export or local consumption, developed by the Fundación para el Desarrollo Frutícola. For more information, see Trade, Environment and Development, Background note by the UNCTAD secretariat TD/B/COM.1/70, accessible at: www. www.unctad.org/Templates/meeting.asp?intItemID=3314&lang=1&m=9478&info=doc.

15 A recent study by the International Trade Centre (ITC) found that no less than 4,000 of the 5,000 goods that are internationally traded and reflected in trade statistics are subject to mandatory environmental or health regulatory requirements (Fontagné and von Kirchbach, 2001).

16 They can be more stringent in terms of product or process requirements or in terms of reporting/certification requirements.

17 In Brazil, for instance, some 70 per cent of fruit exports to Europe are subject to the Standard on Good Agricultural Practice (for fruit and vegetables) of EurepGAP (Ferracioli, 2004).

18 "Often, the specific measures that satisfy the objectives of government regulations are spelled out in technical standards developed by private organizations. In European countries, the government refers to the privately

developed standards in regulations. In the United States, local authorities, which typically lack the technical resources necessary to formulate the standards, often adopt privately developed standards." (WTO, 2005: 32, 90).

19 For instance, the Code of Good Practice for the Preparation, Adoption and Application of Standards in Annex III of the TBT Agreement.

20 The foremost objective of EurepGAP codes is the assurance of consistency of quality of covered agricultural produce. Social (related to workers' health, safety and welfare) and environmental requirements are almost entirely related to hygiene, and are not classified as "major must" in the checklists of EurepGAP. Most of these issues are either considered as "recommendations" or, in a few cases, "minor must". For details, see EurepGAP Checklist for Fruit And Vegetables (version 2.1. of October 2004), accessible at: www.eurep.org/fruit/Languages/English/ documents.html.

21 For more information in this regard, including certification problems of SMEs, see Plantconsult, 2003.

22 On the adjustment problems of SMEs and the enhanced concentration of suppliers in Thailand's fruit export sector, see Boselie and Buurma, 2003: 123-155.

23 A number of globally operating electrical and electronic companies, such as Sony, issue environmental requirements that provide for a faster phase-out of heavy metal use in electrical and electronics manufacturing than envisaged under the EU's Restriction of Hazardous Substances (RoHS) Directive or Japanese legislation enacted in the context of the recycling-oriented policy framework. For more information, see chapter 2 in this *Review*.

24 However, meeting the voluntary standard does not necessarily mean conforming with mandatory requirements.

25 Key standards used for supply chains can be integrated into trade policy (e.g. government procurement of timber products from certified sustainably managed forests only), but this might raise problems vis-à-vis the WTO.

26 When describing this situation, some studies make a distinction between market access and market entry. According to that interpretation, market entry depends on both market-access conditions – determined by legal, administrative and technical rules – including conditions imposed by the importing countries under internationally agreed trade rules, as well as the competitiveness of the exporter, characteristics of supply chains and the structure of markets (see, for example, UNCTAD, 2003a).

27 Under WTO law, governments have certain responsibilities for non-governmental actors. Therefore, certain voluntary ERHRs could be discussed in the WTO.

28 Exporters in Egypt and China, for instance, claim that importing countries' recourse to ERHRs is much more frequent during the harvest season for food products that directly compete with local supply in the target markets (UNCTAD, 2004a; and information provided by the Mission of Egypt to the WTO).

29 In India, for example, it took the Government and local industry four years (1997–2001) to establish the testing facilities necessary to comply with the European standards concerning limits on aromatic amines in textiles coloured with azo dyes. A recent UNCTAD study on horticultural exports of Bangladesh amply illustrates the lack of capacity for testing and certification (Hossain, forthcoming).

30 At an UNCTAD Subregional Workshop on Environmental Requirements and Market Access for Electrical and Electronic Products from China, the Philippines and Thailand (Manila, 18-20 February 2004), it was highlighted that there was a critical lack of an adequate number and quality of design and process engineers to implement eco-design programmes required for phasing out heavy metals and for designing for recycling following recent EU and Japanese legislation (see: www.unctad.org/trade_env/test1/meetings/manila.htm).

31 For more information, see Rotherham, 2003: 15. Supermarkets or large purchasing companies in export markets often insist on specific certifiers or testing institutions to demonstrate compliance with their requirements, irrespective of whether local inspection and certification capacity is available.

32 According to Garbutt and Coetzer (forthcoming) "of some concern is the apparent lack of underpinning support for the implementation of Good Agricultural Practices in developing countries evidenced by the gradual erosion of official agricultural extension services in parts of Africa. This is at odds with stated Government policies to involve smallholders in the export sector. It is unlikely that the market mechanisms alone would be sufficient to bear all the one-off costs of training and capital investment that are required to make the very large numbers of smallholders compliant with Good Agricultural Practices. In this context the role of the development partners in providing technical assistance has been, and continues to be, crucial.".

33 Accessible at: www.europa.eu.int/yourvoice/consultations/index_en.htm.

34 http://europa.eu.int/rapid/pressReleasesAction.do?reference=MEMO/03/202&format=HTML&aged=0&language=EN&guiLanguage=en.

35 ISEAL is an association of leading international standard-setting, certification and accreditation organizations that focus on social and environmental issues. It has recently developed a Code of Conduct for Setting Social

and Environmental Standards. Among others, the Code calls upon members to actively facilitate participation of developing-country representatives in pre-standard-setting consultations. The Code is mandatory for ISEAL members, and is accessible at: www. isealalliance.org.

36 An impact study of the WEEE and RoHS legislation on key exporters among Asian developing countries was prepared in 2004 for the Sino-European dialogue on environmental and health policy organized by the European Commission. Because of its timing and character, however, this analysis does not really qualify as an ex-ante impact assessment. For more information, see *CREM Newsletter*, Summer 2004, accessible at: www.crem.nl/pagesen/nbzomer2004.html.

37 The Multilateral Fund has so far disbursed more than $1 billion to almost 120 developing countries. This investment has supported about 2,000 projects to phase out some 60 per cent of ODS consumption in developing countries. It amounts to a disbursement of roughly $9 million per developing country in the 1990s or almost $1 million per country per annum.

38 However, this does not rule out the fact that there are still some coordination problems between the government and the private sector, as illustrated by the problems of Guatemala and Honduras in phasing out methyl bromide.

39 The Multilateral Fund was created to meet the "agreed incremental costs" of ODS phase-out in developing countries on the basis of a specific list of categories of incremental costs. It covers costs for technology transfer or domestic development of ODS substitutes, the equipment needed and its installation costs, and training. It also covers support for institutional strengthening of projects, which has been very important in practice. (For more information, see Hoffmann, 2004: section VI.2).

40 In the early years of its existence, the Multilateral Fund supported primarily the closure of ODS-producing facilities in developing countries. More recently, support has also been given to the development of ODS substitutes (see Jha and Hoffmann, 2000).

41 The report of the recently concluded third triennial review of the TBT Agreement (WTO document G/TBT/13) recommends "the creation of an information coordination mechanism".

42 EC submission to the Committee on Trade and Environment (WTO document WT/CTE/W/231) dated 5 September 2003; submission G/TBT/W/247 of Switzerland to the TBT Committee, dated 3 November 2004.

43 For more information, see Draft Final Business Plan of the Standards and Trade Development Facility, June 2004; and http://stdfdb.wto.org.

44 For a more complete discussion on the limitations of Article 11 of the TBT Agreement, see Rotherham (2002).

45 It needs to be borne in mind that the coverage of the TBT Agreement goes far beyond the issue of ERHRs. Furthermore, the disciplines of the TBT Agreement have not yet been sufficiently tested through dispute settlement. Conclusions on the interpretation of the Treaty are therefore preliminary.

46 This is perhaps due to the fact that the TBT Agreement covers a wide spectrum of mandatory requirements, well beyond the realm of the ERHRs.

47 The ISO Information Network is an agreement between standardizing bodies to combine their efforts in order to make information on standards, technical regulations and related matters readily available whenever it is required. ISONet is a network comprised of the national standards information centres and it constitutes the links between them. It includes also the ISO/IEC Information Centre in Geneva and a few international members that have similar responsibilities for providing information at international level. (For more information, see: www.wssn.net/WSSN/RefDocs/isonetdir/ISOIEC.html).

48 By way of illustration, the report on the recently completed Third Triennial Review of the TBT Agreement (WTO document G/TBT/13) highlights that "improvements are needed in complying with notification obligations, in particular with respect to the timing of notifications, so that these are made early enough for other Members to comment on". In this regard, the document makes a number of recommendations, many of them, however, only resulting in "best endeavour" measures.

49 In the case of these two directives, the EU gave 30 and 41 months, respectively, between their publication and entry into force, whereas the TBT Committee has recommended only 60 days (WTO document WT/CTE/W/239).

50 Interestingly, it is not the body of the TBT Agreement but Annex 3 that stipulates in Article J that "standardizing bodies shall publish (at least every six months) the standards it is currently preparing". Environmental dialogues (bilateral, regional or multilateral), complemented by trade dialogues between developed and developing countries, could also play a useful role in promoting transparency on planned environmental regulation and its trade effects (Graff, 2004).

51 At a national UNCTAD workshop in the Philippines, a recent Japanese notification (G/SPS/N/JPN/104 of 11 July 2003) on stricter maximum residue levels for a large number of pesticides and products was cited as an example of not being very clear for exporters. For more information, see UNCTAD/PhilExport/DTI/PBE National Policy Dialogue on Environmental and Health-related Requirements for Horticultural Products, Manila,

2-3 December 2004, accessible at: www.unctad.org/trade_env/test1/meetings/manila2.htm.

[52] Some more advanced developing countries such as Brazil, India or South Africa actively participate in debates on notified regulations.

[53] Harmonization can be defined as the "process" by which technical regulations (and also standards) and conformity assessment applied to "like products" approved by different bodies establishes interchangeability of products and processes. It is also important to note that harmonization aims at the application of identical technical regulations (or standards), but also includes mutual recognition and determination of equivalence. This was the working definition discussed at the 4th meeting of the UNCTAD/FAO/IFOAM International Task Force on Harmonization and Equivalence in Organic Agriculture, Nuremberg, 28 February 2005. For further information on the ITF definitions, see UNCTAD/FAO/IFOAM (2005), *Strategy on Solutions for Harmonizing International Regulation of Organic Agriculture. Harmonization and Equivalence in Organic Agriculture*, Vol.2, Background papers of the International Task Force on Harmonization and Equivalence in Organic Agriculture. (UNCTAD/DITC/TED/2005/15), Geneva, UNCTAD, FAO, IFOAM.

[54] Mutual recognition is a tool by which conformity assessment results against one standard are recognized as being comparable to those against another standard. There is no attempt to converge the standards against which products are judged.

[55] Equivalence is the acceptance that different standards or technical regulations on the same subject fulfil common objectives. The term "equivalence" is mostly used for mandatory technical regulation, whereas "benchmarking" is used to denote technical equivalence between voluntary standards.

[56] In many cases, proposals for new international standards must be accompanied by a commitment from a country to provide secretarial support services; this has financial and human resource implications. In addition, the proposal must frequently include initial background information, such as information on existing standards, as well as technical analysis and scientific reports supporting the proposal to develop an international standard. This requires a high degree of technical capacity. (For more information, see Henson, Preibisch and Masakure, 2001).

[57] The Codex Alimentarius Trust Fund is a good example, which facilitates participation of developing countries in Codex meetings.

[58] Both these sets of standards provide frameworks or templates; they do not contain a fixed list of specifications, but provide guidelines that different countries can follow in crafting their own, locally defined, specifications. (For more information, see Westermayer and Geier, 2003).

[59] For more information, see: www.unctad.org/trade_env/test1/projects/ifoam2.htm.

[60] A recent series of country case studies of the World Bank on the challenge of standards in food markets has identified the absence of national strategies and haphazard allocation of priorities in exporting developing countries among key weaknesses (van der Meer, 2004).

[61] Adjustment costs arise at the enterprise and macroeconomic level, including restructuring costs. Macroeconomic costs, in particular for governments, include costs for (i) setting up and running a system of standards, metrology, testing and quality assurance; (ii) establishing physical infrastructure such as laboratory services, educational and research institutions; and (iii) developing institutional capacity for monitoring and follow-up. For more information, see Cerrex Consultancy, 2003; and UNCTAD, 2003b, Country case study for Cambodia, at: www. unctad.org/trade_env/test1/meetings/bangkok6page.htm.

[62] Examples of such an approach can be found in China and Thailand, as elaborated in chapter 2 of this *TER* on environmental requirements affecting electrical and electronic exports from East and South-East Asia.

[63] See next section on competitiveness for more details.

[64] The concept of competitiveness is discussed in detail in UNCTAD, 2004c.

[65] By way of illustration, large electronic companies, such as Sony, IBM and Hewlett Packard, have taken steps to accelerate the phasing out of heavy metal use in their products and significantly improve the energy performance of their goods.

[66] In recycling of used lead-acid batteries, for instance, pollution-control, water treatment and waste disposal costs account for about 10 per cent of total production costs. However, this figure does not include the depreciation costs of "clean" capital equipment (Parker, 1998).

[67] Over three years, Philippine Recyclers Inc. (PRI), a battery recycling company, systematically improved its environmental performance and invested some $80,000 (not counting capital equipment) in achieving ISO 14001 certification in 2001. The environmental improvements resulted in net economic benefits through significant savings in resource use and environmental management costs, in the following order: fuel consumption: 17 per cent; power consumption: 21 per cent; waste generation: 19 per cent; environmental management costs: 20 per cent (Guerrero, 2001).

[68] For example, bans on certain substances and (eco-)labelling. Management systems primarily aimed at controlling food safety risks (such as HACCP) may also refer to certain environmental issues.

[69] Environmental requirements relating to forestry products (including paper) comprise environment-related technical regulations (e.g. restricting the use of bleach in paper, the use of formaldehyde glues in wood panels), recycled content in pulp and paper products, and regulations on recycling and recovery of packaging waste. There are also voluntary instruments such as eco-labelling.

[70] Such as product content requirements and bans on certain substances.

[71] Such as bans on the use of certain substances and packaging requirements. Voluntary measures include eco-labelling. In certain cases buyer requirements and private-sector initiatives focus on environmental impacts throughout the supply chain.

[72] See examples for electrical appliances and electronic equipment mentioned in the previous section.

[73] Even in a rapidly industrializing country such as Thailand, SMEs account for 85 per cent of all manufacturers in an industry as modern as electrical and electronic goods (Hengrasmee, 2004).

[74] This may also apply to standards set by MEAs, such as the Montreal Protocol. In this case, however, the Multilateral Fund of the Protocol covers costs for technology transfer or domestic development of ODS substitutes, the necessary equipment and its installation costs, and training.

[75] The report of the Expert Meeting is available at: www.unctad.org/en/docs//c1em19d3_en.pdf. Subsequently, the Trade Commission of UNCTAD, in February 2003, reached agreed recommendations based on the outcome of the Expert Meeting. The report of the Commission is accessible at: www.unctad.org/en/docs/c1d58_en.pdf.

[76] The CTF was launched at the UNCTAD/Inmetro Workshop on Environmental Requirements and Market Access for Developing Countries, Pre-UNCTAD XI Trade Week, Rio de Janeiro, 7-8 June 2004 (see www.unctad.org/trade_env/test1/ projects/taskforce.htm).

[77] The inaugural meeting of the CTF pointed out that its activities are not intended to "second-guess" the legitimacy and objectives of environmental requirements, or to develop guidelines for good regulatory practice.

[78] The exploratory work will clarify data gathering, legal and maintenance issues before launching pilot activities on the "portal".

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Commentaries

Tjalling Dijkstra
Senior Policy Adviser, Policy Coherence Unit, Ministry of Foreign Affairs, The Netherlands[1]

The chapter by Hoffmann and Rotherham deals with an important and challenging topic. Consumers and pressure groups in developed countries are increasingly demanding that agricultural and industrial products be completely safe, and that they be produced under sustainable conditions, taking account of the environment, social issues (such as child labour) and animal welfare. In response to these concerns, product and process standards[2] and compliance procedures, as formulated and implemented by both government regulators and the private sector, are becoming more and more stringent. Other factors that have furthered this trend include a number of recent crises in the food and feed industry, growing scientific evidence of the adverse effects of certain materials and substances on health and the environment, increasing awareness of the need for sustainable development in developing countries (including environmental protection), improved testing equipment that is able to detect minute residues, competitive industrial strategies, and growing international trade, which inevitably increases the potential risks.

The WTO's *World Trade Report 2005: Exploring the Links Between Trade, Standards and the WTO*, uses the Perinorm database to illustrate the magnitude of the challenge or – if you like – problem. At present this database contains as many as 650,000 standards from 21 primarily developed countries, including public and private, mandatory and voluntary standards. Though it does not give figures, the WTO report observes, like the chapter by Hoffmann and Rotherham, that a growing number of these standards are environment-related product and process standards, set by both governments and the private sector.

When developing countries are given the time to gradually adopt stricter standards that are in line with their level of development, they will also improve their own health, social and environmental conditions. Securing or maintaining access to export markets may, however, require them to accelerate the pace of adjustment. It may oblige many developing countries to use scarce resources to make the required investments or face a loss of market share, even though other development priorities could be more pressing, as Hoffmann and Rotherham correctly observe. Strict product and process standards in developed countries could thus have an unintended negative impact on exports from developing countries. Many countries face serious deficiencies in their national regulatory and supply capacity: shortages of skilled staff, no internationally recognized testing laboratories, inadequate physical infrastructure, lack of awareness among domestic producers, and poor dissemination of information about standards in export markets. At the same time, it is acknowledged internationally that developing countries need more support for participating in the development of international standards and for domestic implementation of standards.

The Netherlands is a member of the EU, where most mandatory standards are set at the Community level and no longer by individual member States. Policy coherence for development has become an important concept in the setting of these standards. It is both a legal obligation and a political priority.[3] It means that the European Community and its member States should work to ensure that the objectives and results of their development policies are not undermined by other policies which may have an impact on developing countries, and that these other policies should support development objectives where feasible. A new trend is emerging in relation to standards. First, one of the elements taken into account when drafting and implementing mandatory standards and regulations is their possible impact on developing countries. Second, it is increasingly recognized that developing countries should be offered financial and technical assistance so that they are in a better position to comply with these standards. The Netherlands refers to this as the "two-track approach".

First track

The two-track approach is also reflected in the chapter by Hoffmann and Rotherham. As part of the first track, the authors mention two important mechanisms to make standard-setting more inclusive, more transparent and more compatible with policy coherence for development: stakeholder consultations and *ex-ante* impact assessments. The EU has recent experience with both mechanisms. The authors also mention the internet-based consultation by the European Commission on its draft REACH directive. The response was overwhelming: more than 6,400 contributions from governments, industry associations and individual firms. Despite its success, the consultation does raise a question. The EU imports chemical substances from as many as 99 different developing countries, including 48 low-income countries. However, only 11 developing countries participated in the internet consultation, including one low-income country (India). Why did governments or industries in the other developing countries not do so? Was it a lack of institutional capacity to understand fully the implications of REACH? Did these governments have other priorities, or were their industries not affected? Or did they think that the major chemical producers, such as China, India, Brazil and South Africa, would also take care of their interests? I do not have a definitive answer, but given the complexity of REACH, the lack of institutional capacity may have been a major reason for not participating. This suggests that developing countries, especially low-income and least developed countries (LDCs), may need technical assistance not only to implement standards, but also to participate in consultation processes during standards-setting. This would require that the "active outreach by developed countries to developing countries" as advocated in this *TER* chapter be taken a step further.

In addition to improved stakeholder consultations, the EU has developed a consolidated impact assessment method. The method allows for an extended assessment of the impact on developing countries if such countries are considered to be major interested parties. An example is the extended impact assessment for the African, Caribbean and Pacific (ACP) group of countries performed for the Regulation on Official Feed and Food Controls (effective as of January 2006). The assessment not only concluded that ACP countries may be severely affected by the Regulation, but also estimated the amount of aid required to help them strengthen their basic capacity to meet the new EU requirements. In phase II of the impact assessment the required capacity building will be further specified. Thus the first and second tracks of the two-track approach have been explicitly linked: when considering the impact on developing countries, the required technical assistance and capacity building is already specified. This linkage is new, even in the EU, and it is recommended that it become standard practice. The results can also be used when giving notification of SPS measures in the WTO, in line with two notification improvements adopted by the SPS Committee over the past few years: the recommended procedure that requests identification of members or regions that may be particularly affected by the measure in question (G/SPS/7/Rev.2 of 2002), and the revised procedure to enhance the transparency of special and differential (S&D) treatment and technical assistance (G/SPS/33 of 2004), as discussed by Hoffmann and Rotherham.

The EU Regulation on Official Feed and Food Controls included an interesting new form of S&D treatment. The chapter by Hoffmann and Rotherham correctly refers to Article 12 of the TBT Agreement and Article 10 of the SPS Agreement as expressions of the relevant international obligation. It does not, however, mention an important and underutilized S&D tool, namely longer transition periods if the required level of protection of public health and safety or the environment necessitates this. Article 50 of the Regulation on official feed and food controls, on *Support for developing countries*, contains three elements: (i) the EU may offer technical assistance to developing countries on request; (ii) the EU shall provide aid to developing countries for building the required institutional capacity; and (iii) developing countries may request a phased introduction of the EU regulation's import conditions, taking into account the progress made in building institutional capacity through the EU's aid programmes. This explicit linkage between a longer transition period, the EU's support for capacity building and its impact on the ground is unprecedented, and could be regarded as a more advanced and valuable form of S&D. The proof of the pudding

will of course be in the implementation of Article 50, which will be quite a challenge. Developing countries must be fully aware of the alternatives on offer. They will have to request phased introduction and concrete support, while the Commission and member States must deliver on the requested aid. While waiting for the "eating of the pudding", we may conclude for now that the principle is valuable and worthy of recommendation from the perspective of policy coherence for development.

REACH and Official Food and Feed Controls are public, mandatory standards set by government regulators that have to be met in order to enter the market. Hoffmann and Rotherham stress that we should also focus on private, voluntary standards. Many health and environmental standards are set by industry and are voluntary. This does not make them any less of a concern as potential barriers to trade. The inclusiveness and transparency of the private standard-setting process can be at least as problematic as that of public standards, but without the multilateral guarantees of the SPS and TBT Agreements. The initial EurepGAP protocol, for example, was imposed on developing-country suppliers without any prior consultation or impact assessment. On the other hand, the EurepGAP example shows that private standards can also evolve more quickly than public standards. The EurepGAP protocol of 2004 for fruit and vegetables is less Eurocentric than the earlier version of 2001. Moreover, EurepGAP allows benchmarking of national GAP protocols of exporting countries against EurepGAP (e.g. KenyaGAP). Whereas mutual recognition agreements and technical equivalence agreements for public standards are not common, the benchmarking of private standards is becoming a regular practice. Even donors have discovered benchmarking as an interesting area for development cooperation.

Second track

This brings us to the second track of the two-track approach on standards: offering financial and technical assistance to better enable developing countries to comply with public and private standards. One aspect of this technical assistance is improving access to relevant market information on standards for exporters. The Dutch Centre for the Promotion of Imports from Developing Countries (CBI) has a fair amount of experience in this area. Having published trade manuals on specific product groups for 20 years, the Centre started an online database on EU environmental requirements in the early 1990s. This database was then gradually broadened to cover consumer health and safety, occupational health and safety, and quality aspects of products and production processes (including codes of conduct for corporate social responsibility). The current Access Guide covers all public and relevant private standards for selected product groups on the EU market. There were two reasons for the gradual broadening of the database. First, as also mentioned by Hoffmann and Rotherham, an increasing number of standards are multidimensional. Second, exporters in developing countries are looking for a one-stop source of information that covers all aspects relating to their product and the targeted market. They want the full picture, which is something to keep in mind when developing a new portal on standards (as UNCTAD is currently working towards within the framework of the Consultative Task Force on Environmental Requirements and Market Access for Developing Countries).

The CBI has also found that targeting exporters in developing countries through national industry associations, export promotion boards or chambers of commerce is not always effective. Many of these institutions are weak and may, for instance, not reach local SMEs. However, for foreign information providers like the CBI it is difficult to reach SMEs directly. Part of the longer term solution will therefore be to assist developing countries in strengthening their industry associations, export promotion boards and chambers of commerce (part of the "enabling environment"). In addition, the functioning of TBT and SPS enquiry points could be further improved, and the format of TBT and SPS notifications made more user-friendly. However, this only improves the transparency of public standards. One of the flaws in the present system is that notification of private standards is not compulsory, since the TBT Agreement only binds national governments and not industries or private standard-setting organizations.[4]

Technical assistance and capacity building cover a broad spectrum of activities, as shown in box 3 of this *TER* chapter. The authors call for all this assistance to be better coordinated on the basis of published registers of trade-related projects. This is a valuable recommendation. However, experience with existing registers, such as the joint WTO/OECD Trade Capacity Building Data Base, shows that we have to solve another problem first, namely the quality of reporting. Many donors underreport because some of the projects and programmes that are trade-related are classified differently in their national databases (e.g. under health, education or environment). In the case of reported projects and programmes, often only the project title, budget total and a one-sentence description appear in the register, which, in multi-dimensional projects does not provide sufficient information on the trade components. The sub-classification of projects into SPS, TBT, and trade and environment is often done in a haphazard way. Thus, since coordination on the basis of published registers is inefficient, donors should do their homework first and improve their notification procedures.

Hoffmann and Rotherham rightly mention the reactive nature of much of the assistance provided. In the case of public standards this relates to: (i) the reluctance of policy-makers to start discussing technical assistance while the standard-setting process is ongoing; (ii) the limited transition period between the approval of a new standard and its entry into force; (iii) the release of funds for technical assistance only after the regulation has been approved; and (iv) the information gap which leads exporters or their governments to request assistance only after they experience compliance problems.

Obstacles may even be faced in the delivery of reactive technical assistance if, for instance, such assistance was not foreseen at the time donors and recipient countries adopted multi-annual development cooperation plans as part of national development and poverty reduction strategies. To solve this problem and reduce the time required between identification of technical assistance needs and actual delivery, the European Commission is developing technical assistance instruments in the SPS and TBT fields that can be rapidly mobilized or adapted to changing situations.[5]

Problems may also be faced in the precise formulation of the technical assistance and capacity building required. Like all development cooperation, trade-related assistance should be demand-driven, but drafting a project proposal on standards requires specialized knowledge that may not be readily available in the recipient country. The Standards and Trade Development Facility of the WTO, World Bank, FAO, WHO and OIE, which focuses specifically on SPS standards, has solved this problem by providing project preparation grants. These grants bridge the gap between identified needs (e.g. in the Poverty Reduction Strategy Papers or the action matrices for least developed countries within the Integrated Framework) and their precise articulation.

The need for increased, improved and better coordinated trade-related technical assistance and capacity building features prominently on the international agenda. Trade-related assistance is one of the indicators used to monitor progress on the eighth Millennium Development Goal: Developing a global partnership for development. The outcome document of the UN High-Level Meeting of the General Assembly of 14-16 September 2005 mentions the need for increased aid to build the productive and trade capacities of developing countries, and asks for further steps in this regard. Aid for trade is also an important topic in the Doha Round negotiations. Hoffmann and Rotherham point out that such aid should also target standards.

All in all, this chapter has succeeded in drawing an interesting picture of the development aspects of standard-setting and compliance procedures, especially in the area of environmental and related requirements. More international discussions and actions in this area are needed. To this end UNCTAD could play an important facilitating role through the Consultative Task Force and other vehicles.

Paulo Ferracioli
Head of International Affairs, National Institute of Metrology, Standardisation and Industrial Quality (Inmetro), Brazil

UNCTAD's discussions on existing conflicts between the promotion of economic and social development through trade and environmental protection have made significant contributions to the understanding of complex topics, such as the one between environmental requirements and market access for developing countries. This increased understanding has, in turn, paved the way for policy proposals and actions aiming, as far as possible, at a harmonious attainment of both objectives. The chapter by Hoffmann and Rotherham is fully aligned with this effort, and makes a valuable contribution to the discussion.

At first sight, the title of the paper may raise eyebrows among those who think of trade as the way to the development necessary for improving standards of living in developing countries. Moreover, previous experience espouses the idea of promoting environmental protection through the use of a growing number of environmental and related health requirements (ERHRs). However, these have become more and more stringent and complex to deal with, particularly for developing-country exporters. More often than not, these ERHRs, which have a profound impact on trade, are seldom adequately evaluated, thus fuelling suspicion that they have been implemented for market, rather than environmental, protection.

As pointed out by Hoffmann and Rotherham, these resentful feelings are "unlikely to fade away as long there are no clear criteria that distinguish environment-protective from trade-protective ERHRs". The authors correctly suggest that ERHRs may be applied to protect markets in the same way as other standards and regulations, underlining that "this is why the impression arises that ERHRs are erring a bit too much on the mere technical exigencies, and too little on development issues". The recognition that this reflects real difficulties for developing countries logically leads the authors to place their analysis of ERHRs in the development context.

Another important topic presented in the paper concerns the different contexts found in developed and developing countries, and the consequent discrepancies in the setting of priorities. Environment and health protection are considered extremely relevant for both developed and developing countries. In Brazil, as in other countries, ERHRs are growing in number and increasing in stringency as a result of the political desire of the majority of the population. But it cannot be denied that the required resources to meet such requirements compete with other urgent needs, such as the improvement of education, sanitation, research, transportation and overall infrastructure.

In this context it is not easy for developing countries to invest in the strengthening of the institutions needed to deal with ERHRs, such as early warning systems, standards bodies, expert consultants, testing and metrology labs and accreditation agencies, as Hoffmann and Rotherham correctly stress. One effective avenue for addressing developing countries' difficulties in meeting stringent ERHRs in export markets is the development and implementation of comprehensive and well-coordinated technical assistance and capacity-building (TA&CB) programmes. Inmetro, a key institution to help Brazilian exporters cope with the ERHRs of other countries, is an example of what can be achieved through a well planned and implemented TA/CB programme.

It is interesting to point out that this was possible because donor institutions, such as the German Physikalisch-Technische Bundesanstalt, were prepared to discuss and understand the real needs in Brazil, and did not try to implement a donor-driven programme. This, together with the awareness of Brazilian companies on the importance of such a programme, was fundamental for establishing a genuine commitment to its objectives and activities. Such a commitment helped create the necessary political conditions for the provision of adequate Brazilian counterpart funding.

Inmetro has also been involved in other TA/CB programmes the results of which have fallen far short of the initially stated objectives. Certainly, a number of internal constraints contributed to the failures, but it is also a fact that a lack of flexibility among donors or a clear bias to develop such programmes based exclusively on donor interests, instead of a mutually agreed outcome, caused the poor eventual performance. Summing up, TA/CB programmes will have a greater chance of achieving their objectives if donors discuss them with developing countries with an open-minded approach, effectively trying to help them access the benefits from participation in international trade.

It is also worth mentioning that developing countries' enormous efforts to improve vital technical infrastructure will not have a positive impact on exports if developed countries hinder the effective use of their newly achieved supply capacity. Many ERHRs require tests that can be done in laboratories in developing countries, but more often than desirable authorities of importing developed countries do not recognize the validity of their testing results and require re-testing in local labs. These concerns were articulated during the WTO TBT's Third Triennial Review, and will certainly also figure prominently in the Fourth Review next year.

Inmetro has recently launched or participated in a number of proactive initiatives to adjust to ERHRs in export markets and facilitate market access. These are discussed below.

Inmetro-Fiesp Agreement

Inmetro has recently signed a cooperation agreement with the Federation of Industries of the state of São Paulo (Fiesp), which aims at collaborating to identify and monitor technical barriers to trade. The agreement envisages the following activities: follow-up and analysis of notifications issued by member countries to the TBT Committee; exchange of information on technical barriers to trade between the two institutions; strategic monitoring of tendencies and best practices in selected countries on standardization and regulatory regimes; and dissemination of information of interest to Brazilian exporters in the fields of standardization, metrology, conformity assessment and technical barriers to trade.

Alerta Exportador for member countries of the Southern Common Market (MERCOSUR)

In December 2003, a technical cooperation agreement was signed involving the national metrology institutes of the four MERCOSUR countries: Argentina, Brazil, Paraguay and Uruguay. By enabling the use of Inmetro's Alerta Exportador! (early warning system for exporters) by the national metrology institutes of Paraguay, Argentina and Uruguay, this initiative provides the exporters of all four countries with valuable information for meeting technical requirements and enhancing market access overseas.

Brazilian comments on the Azo Dyes Directive

Inmetro, through the TBT Inquiry Point, has coordinated Brazilian efforts to establish its position with regard to EU Directive 2004/21/EC, relating to restrictions on the marketing and use of "azo colourants". Consultations with the major stakeholders were held, which resulted in comments sent to the EC Inquiry Point that reflected concerns expressed by both the Brazilian Association of Chemical Industries and the Brazilian Association of Textile Industries.

Brazilian Case-Study on Formaldehyde Emissions Restrictions

Inmetro has recently been requested to contribute to a research project of the Organisation for Economic Co-operation and Development (OECD), which aims at producing empirical evidence for the identification of trade concerns arising from conformity assessment procedures. The project will be implemented through case studies, which will document the experiences of developing

countries' exporters in facing and addressing technical requirements. It thereby hopes to shed light on how such requirements can constitute technical barriers to market access. According to OECD, the findings of this research will be made available to participants, thus providing input for the discussions and work in the OECD, WTO and other international forums concerned with market access facilitation. The Brazilian case study focuses on the problems faced by the wood and furniture sector for meeting formaldehyde emission restrictions in targeted export markets, particularly the EU.

Another concern expressed by developing countries has to do with the progress, or rather lack of it, during WTO discussions, on the issue of non-product-related process and production methods. For years this issue has been part of the agenda of the WTO's TBT Committee, but no agreement has been reached so far, because of different opinions about its legitimacy. The subject was discussed at length during the Uruguay Round[6] and the results contributed to the agreements reached.

According to Annex I of the TBT Agreement, only product-related mandatory technical requirements fall under its scope. Such a provision aims at preventing member countries from raising technical barriers to trade using the excuse of environmental protection to deny entry to those products whose production method, due to technological imbalance between importing and exporting countries, may prove to be harmful to the environment.

Along with the provisions, stated in Article 11 of the TBT Agreement for technical assistance between member countries, through which capacity building and investments on technological infrastructure may be implemented, a possible solution to the debate on non-product-related process and production methods could be envisaged through voluntary certification programmes. A significant number of developed countries support such programmes, which involve establishing appropriate criteria, provided they are based on mutually agreed certification rules. This points to the importance of fostering and facilitating the establishment of mutual recognition agreements between official accreditation bodies of member countries.

It is also important to point out that although developing countries recognize the benefits such voluntary certification programmes may bring in terms of reducing technical barriers to trade derived from non-product-related process and production methods, the following concerns on possible market access restrictions still remain: (i) insufficient number of internationally agreed testing procedures, which may raise market entry barriers for developing countries' products; (ii) high compliance costs; and (iii) inclusion of labelling requirements involving criteria on labour and other social issues.

It is hoped that these comments point to possible implications of environmental and related health requirements for developing countries. They aim to draw attention to the urgent need to extend the debate beyond WTO rules and disciplines, particularly concerning issues related to non-product-related process and production methods. It is believed that UNCTAD's new Consultative Task Force on Environmental Requirements and Market Access for Developing Countries can play a fundamental role in pushing such discussions forward in a way that would enable a win-win balance between trade promotion and environmental protection.

Jan Kees Vis
Sustainable Agriculture Manager, Unilever N.V., Rotterdam, The Netherlands

Introduction

The authors suggest in the introduction that there is a trend amongst consumers in OECD countries to "want the goods and services they purchase protected by environmental and related health requirements" (ERHRs). They suggest that this is an explicit or implicit need of consumers, thus making consumer preference the driving force of this development. Governments react as governments are supposed to, by developing regulations; NGOs embark on standard-setting and companies start imposing strict requirements on their suppliers.

I am not so sure that this is a fully adequate description of drivers and roles in this process. Consumer preference plays a role, for sure, but my feeling is that in some – perhaps many – cases, NGO agendas are the real driving force. In view of the inability of governments, intergovernmental organizations, international agreements and others to address the real and pressing needs of the planet (hunger, poverty, illness, environmental degradation, and in fact all the Millennium Development Goals), it is often NGOs who alert consumers to these issues and propel them to act. The resulting reality, namely a proliferation of ERHRs, remains the same, regardless of what the driver is and the effect this has on trade. A more thorough analysis of what the driving forces are might eventually lead to different conclusions and recommendations.

An interesting phenomenon is of course that the impact of the desire of OECD consumers to protect their consumption by ERHRs is mostly felt in developing countries. The authors do not address the question as to whether national governments in OECD countries have a responsibility to educate their citizens about the effects of their consumption. I understand it is beyond the scope of chapter 1 of this *TER* to ask this question, yet people I deal with in developing countries on a regular basis pose this question to me all the time.

Scope and trends of ERHRs

It is indeed important to recognize that the objective of ERHRs is to change production and trade patterns by altering market conditions, as discussed early in the chapter. Yet in the remainder of the chapter, the authors refer more to market distortion than to "altering market conditions". Alteration or distortion, the distinction is a matter of perspective. It is appropriate to acknowledge that not only are the requirements of ERHRs relevant, but also the procedures by which they are developed, adopted and applied. Equally, not only are product properties relevant, but also the way in which products have been produced (currently not possible in WTO trade nomenclature, as discussed in the chapter in relation to coping with ERHRs).

It is obviously true that ERHRs are becoming more stringent, complex and multi-dimensional. In essence, that *is* the problem, rather than just an aspect of the problem. The least of the problems, in my view, is that the current trade agreements find it difficult to classify them as a result. Classifications usually follow developments in the market, not the other way around.

The authors identify a shifting emphasis away from risk management to risk avoidance, and illustrate this with food safety. Since I work for a food producer, I am constantly aware of the fact that food safety now is better than ever before. Yet food scares seem more frequent than, say, 10 years ago, and these scares communicate to the general audience a different message. It might well be that ever stricter food safety regulations make it increasingly attractive for certain suppliers or producers to break the rules through fraudulent actions (e.g. animal feed problems). The situation that results is that, although overall safety of food is excellent indeed, the perception of the consumer is a different one, influenced as it is by high-impact incidents. Everybody in food production knows there is no such thing as zero risk; food handling and preparation requires some level

of skill and attention, also in the consumer's home. When general rules about food hygiene, handling and storage are followed, the risks are negligible and acceptable, but one should never suggest that there are none.

Regarding the supply-chain-driven nature of ERHRs, clearly, voluntary, private-sector-driven ERHRs have a different impact than regulatory ones, and they are usually initiated for different reasons. Companies may want to protect the resource base on which their business relies (e.g. Marine Stewardship Council), or they may want to capture market share with consumers who have strong beliefs about helping disadvantaged producers (e.g. Fair Trade). There is, however, a common element that runs through almost all private-sector-driven ERHRs. All of them have compliance with local laws as the starting point. Invariably these initiatives find that developing countries have excellent laws in areas such as protection of the environment, safety and health at work, and child labour. Invariably they also find that implementation and enforcement of these laws is weak, insufficient or simply absent. De facto, this results in a situation where private sector initiatives (e.g. the Ethical Trading Initiative in the United Kingdom) become a mechanism for ensuring implementation of national legal requirements in producing countries (often developing countries).

In their summary, the authors suggest that ERHRs "seek to restrict trade in goods and services that have *relatively* worse environmental and related health impacts". One might also state of course, that ERHRs seek to *promote* trade in goods and services that have superior environmental and health impacts, which makes them promoters of trade.

Coping with ERHRs

This section of the chapter deals with the challenges developing countries face. Clearly, these are many, and equally clearly the challenges they face in coping with ERHRs are the same as those they face in general. Lack of institutional capacity, resources, trained personnel, and transparent and inclusive policy-making are all problems that are not exclusive to coping with ERHRs. It is also clear from this chapter that many good initiatives are under way to assist developing countries in dealing with these challenges.

Regarding the discussion on the complicated issue of technical assistance and capacity building, here again a picture emerges which, in my view, is not specifically linked to the issue of trade and ERHRs. It is a general picture of a free market in development, in which parties are trying to find their way. Personally, I believe that the successful players in this market will be the ones who understand that interdependency is the key to success. Once there is an understanding that the capacity to manage complex supply networks is crucial to growth, it will become clear that technical assistance and capacity building are part and parcel of what modern industrial development is all about.

The authors, who are far more experienced in this area than I am, are not impressed with how developed countries have organized coordination between, for example, trade ministries and development ministries. I can only agree, be it from limited personal experience.

The authors make a good assessment of the limits of the WTO with regard to regulating voluntary ERHRs (e.g. through the WTO Agreements on Sanitary and Phytosanitary measures and Technical Barriers to Trade). It is also made clear that certain overarching guidelines on how to proceed when producing ERHRs can help, such as notification and transparency requirements. My feeling is that with voluntary private sector initiatives, this advice will be taken to heart. Production companies do rely on suppliers being able to comply with their requirements. Thus prior notification to the supply market about changes in those requirements will be in the interest of the production company.

The suggestion that there is a need for an international framework to facilitate the development of technical equivalence agreements is well supported by arguments, but does not address the fact

that such an institution would add another layer to the ever growing ERHR development process. One can expect that all problems identified in the chapter about the lack of participation of developing countries in ERHR-setting processes, will equally apply to this international framework. Perhaps it would be better to take another look at the principles underlying ERHRs (e.g. to protect the environment, improve safety and health) and assess whether existing and new ERHRs actually contribute to these principles. How many ERHRs that have been implemented can actually show improvement on the ground? The authors argue that developing countries should pay more attention to the potential benefits of adopting and implementing ERHRs, and I can only agree. But what evidence can we offer that this is actually the case?

Hoffmann and Rotherham suggest that the onus is on developing countries to come up with a more proactive and strategic policy approach towards ERHRs. In my view, again, if this is to be sold as part of "shared responsibility", then it should indeed be a responsibility shared. The consumption patterns that lie at the root of trade developments cannot be ignored: developed countries must better organize participatory processes and developed-country ministries must better coordinate links between, for example, changes in trade agreements and aid budgets available for institutional capacity building.

UNCTAD Consultative Task Force

The UNCTAD Consultative Task Force on Environmental Requirements and Market Access for Developing Countries (CTF) was created in the light of the emerging ERHR issue. The authors agree that even if the CTF were as successful as it could be, it would still be able to address the problems created by a proliferation of ERHRs only to a limited extent.

Conclusions

Where governments do not act, others will. That in itself is not a bad thing, but governments should not be surprised about it. There is currently a proliferation of ERHRs in the market, and an inequitable participation of developed and developing countries in the process of setting up, implementing and benefiting from those ERHRs. This is seen by many developing countries as imposing restrictions on their potential for economic growth.

If the inhabitants of this planet have a shared goal (to sustain life, to sustain humanity, to sustain quality of life), and if we agree that this goal can be reached through sustainable development, then trade will have to adjust to the rules of the sustainability game, whatever they are. The onus for achieving this cannot be on developing countries alone. Trade feeds markets, and markets respond to consumption patterns. If trade adjustment is being shaped through ERHRs, then it is a shared responsibility of all trade partners to make ERHRs work (i.e. in their objective to improve environmental and health-related impacts). And the fact that trade is being adjusted does not deny the fact that the unwanted environmental impacts of trade are often caused by unsustainable consumption patterns in developed countries.

The aim of ERHRs goes well beyond the intended one of curbing unwanted environmental and related health effects. There are other elements such as technology exchange, capacity building and enforcing the rule of law, which are perhaps not intended or anticipated but simply come with the process of developing, implementing and enforcing ERHRs. If well conceived, ERHRs should have a beneficial effect, mostly of course in the countries where they are being implemented. After all, that is why they were created in the first place. But in order to make this clear, and to be able to use these beneficial effects in order to persuade developing countries to implement them, ERHRs should be equipped with clear tools to help focus them on the most important impacts and to measure the mitigating effects they have on these key impacts.

The market reality is that in many sectors products are being distinguished from others on the basis of how they were produced (e.g. through one of many eco-labels). Trade organizations would

be well advised to accept this market reality. By the same token, the emergence of ERHRs is caused by a trend that goes beyond the world of trade. Therefore, I completely agree with Hoffmann and Rotherham when they point out that problems experienced with development, implementation and enforcement of ERHRs cannot be solved through trade instruments alone.

Nigel Garbutt
Chairman, EurepGAP

Hoffmann and Rotherham's paper correctly highlights the increasing stringency, complexity and multi-dimensionality of food production standards both public and private, combined with a shift to consumer protection and and risk reduction. In addition, private environmental and health-related requirements have become more and more important in the market place and often take the form of value chains as part of a quality management system. Chain governance is the process of specifying, communicating and ensuring compliance with key product and process parameters along the value chain. Undoubtedly, this requires increasing supplier competence and a pro-active approach to dynamically adjust to new requirements.

The EurepGAP standard has been prominently mentioned in the paper to illustrate some of the salient trends in value chain management. I agree with the broad conclusions of the paper, but particularly appreciate the opportunities presented in this Review and in the context of UNCTAD's new Consultative Task Force on Environmental Requirements and Market Access for Developing Countries for a closer dialogue between public and private sector standard setters and verifiers. The rationale is compelling as both have some mutual complimentary aspects; particularly consumer protection and the desire to see trade on a transparent basis. As the paper underscores, the EurepGAP control points and compliance criteria incorporate mandatory food safety requirements (including traceability, HACCP, and meeting maximum residue levels for pesticides), but go beyond them by including criteria that assure consistently high standards of agricultural production. In this regard, EurepGAP criteria embed environmental and certain social requirements as they relate to intrinsic food quality. Against this background, there are opportunities for cost sharing between public and private sector in respect of compliance testing and verification. Transparency and a participatory approach to standard setting as aimed for in EurepGAP and between commercial players can do much to facilitate trade between developed and developing countries (as demonstrated by the expansion of trade between Kenya and Europe over the last two years).

The experience on implementing EurepGAP, but also other food safety and quality standards such as Safe Quality Food 2000, British Retailers Consortium or International Food Safety Standard, suggests that demonstrable and transparent quality assurance is an increasing necessity for success in global markets. But this requires a constantly increasing competence of suppliers. A key concern in many developing countries in this regard is the lack of underpinning support for the implementation of Good Agricultural Practices, because of the erosion of official agricultural extension services. This seems at odds with the desire of Governments to involve increasing numbers of small rural communities into sophisticated export supply chains. It is unlikely that the market mechanisms alone would be sufficient to bear all the one-off costs of training and capital investment that are required to bring all these smallholders into high value chains. In this regard, the role of development partners in providing technical assistance has been, and continues to be, crucial. It is hoped that Government Agricultural Policies could take account of these emerging factors including a more central role for extension services.

The greater the degree of vertical coordination within value chains, and the higher the required competence level of suppliers, the greater the tendency to rely on a small number of dedicated suppliers for globally acting supermarkets. Importantly it has been demonstrated that small producers in developing countries can be integrated into export markets through compliance with certification requirements. EurepGAP has responded to these challenges by evaluating mechanisms for involving smallholders in certification systems, notably its group certification option. The quoted study does not altogether take into account the actual situation whereby large exporters already incorporate small producers into their chains; they would not do this if it were not cost effective. This remains an area for further research. Smallholders bring as (yet formally unquantified) benefits in terms of continuity of supply and extrinsic product quality for labour intensive horticultural crops.

Practical examples however show that small producers can be organized into efficient groups, which can be certified enabling them to be integrated into high value supply chains. To get there requires initiatives on two fronts: (i) establishing effective producer organizations; and (ii) developing a national code on Good Agricultural Practice for a specific product group, which reflects national circumstances and certain development priorities aimed at being benchmarked to EurepGAP.

Many experts point to the importance of establishing horizontal linkages among producers, such as producer organizations, to mediate the relationship between small-scale producers and large buyers. Such organization is necessary to consolidate a required volume of product and improve supply, distribution and management. Much attention needs to be paid to capacities within those organizations to implement systems of supply-chain management and meet required market standards, including the capacity to design and finance investment, administration, technical support and strong organizational structure.[7]

EurepGAP provides farmers the opportunity to certify their products in a group. This has the effect of catalyzing the development of strong and viable groups of smallholder farmers that can compete more effectively in a global marketplace. However, group certification requires the existence of centralized quality management systems, e.g. a national code on Good Agricultural Practice or a producer group driven code and most importantly an implementation system. The application of Good Agricultural Practices (GAP) in smallholder agriculture, stemming from an export requirement, also brings key food safety and environmental gains to developing national markets and this is gaining in appreciation by governments and policy makers.

A national standard on GAP, privately owned by a group such as exporters or possibly a government, has the benefit for producers to certify their products under a locally developed standard that has been recognized as equivalent to EurepGAP. The applicant standard goes through a series of review processes by independent reviewers as well as a peer review of EurepGAP members. When such a standard has been found equivalent in terms of the operations of the standard and the technical criteria, farmers have the benefits of certifying their products under a single standard that has international buyer recognition.

A benchmarked national standard on GAP benefits from local stakeholder participation and is cognizant of local criteria whether these are regulatory, agronomic or social. This has the tendency to make implementation more successful, widespread and cost effective. A national standard can also provide the opportunity for marketplace branding and advertising although this would normally be part of a wider promotional programme with sustained funding.

Where there is an absence of supporting local public and private organisational structures involved in export horticulture, or they are in formative stages of development, it is unlikely that the moderation of a national GAP standard would achieve a viable critical mass of producer member support. Operators in this context could seek to “piggy back” onto initiatives in neighboring countries or opt for certification against the EurepGAP protocol directly. Significant opportunities exist to share best practice on a coordinated regional basis to enable the integration of small-scale farmers into high value markets.

Following a decision by the first substantive meeting of UNCTAD’s Consultative Task Force on Environmental Requirements and Market Access for Developing Countries, FoodPlus GmbH, the not for profit secretariat of EurepGAP, is teaming up with the UNCTAD secretariat in conducting a series of stakeholder dialogues in Central and Southern America, East Africa, and South-East Asia on the benchmarking option under EurepGAP. The objective of these dialogues is to raise the awareness on the benchmarking option and its requirements and to discuss ways and means of reflecting national circumstances and development priorities in the national GAP.

Sanjay Kumar
Director, Trade Policy Division, Ministry of Commerce and Industry, Government of India.

Rise in environmental and health requirements

As the liberalization of tariffs and quantitative restrictions on trade in agricultural and food products progresses, more attention is being paid to measures such as food safety regulations, labelling requirements and quality standards. Many developing countries find that environmental requirements which can potentially affect market access are proliferating and becoming more stringent and complex. They are also concerned that some of the standards fixed by developed countries are higher than international standards. Although the WTO Agreement on Sanitary and Phytosanitary (SPS) measures tries to bring about a harmonization of standards by pegging them to international standards for food safety and health of plants and animals in order to protect consumers, these requirements are becoming increasingly complex and multidimensional, which places an enormous burden on developing countries. Besides, these multiple requirements keep changing, and quite rapidly. An analysis of WTO TBT notifications from January 2000 to December 2003 shows that 30 per cent of the notifications were environment and health related. Further categorization reveals that these TBT notifications related to human health (18 per cent), consumer safety (11 per cent), environment and health protection (22 per cent), labelling (16 per cent), consumer protection (23 per cent) and consumer information (10 per cent). The analysis also shows that the distinction between environmental standards and health and quality standards is gradually becoming blurred, as also indicated by Hoffmann and Rotherham. The domains are not easily delineable and they simultaneously serve different policy objectives.

Although the WTO and Rio Principle 11 recognize the diversity of environmental standards across countries, they also note that the standards should reflect the environmental and development context in which they are applied. The WTO preamble endorses the fact that environmental policies must be designed to take into account the situation of each member, in terms of both actual needs and economic means. The principle of special and differential treatment for developing and least developed countries has also been recognized so as to avoid inappropriate or unwarranted economic and social costs to these countries. While the need for standards is acknowledged, there is also general agreement that member countries should be allowed some latitude in meeting sanitary and phytosanitary requirements provided certain conditions are met. The WTO Appellate Body does not stand in the way of environmental protection and is willing to uphold unilateral trade measures that have this objective. Given the above, we need to ask ourselves whether the objectives of free trade are being achieved in the context of the growing number of regulations.

Role of standards

The social welfare function, which reflects the trade-off between income and environmental quality, depends on the stage of economic, social and political development of a country. The variation in environmental standards across countries can be justified, but it is imperative to recognize other factors as well. The environmental Kuznet's curve postulates that as income increases environmental quality worsens up to a point, after which it improves. Trade liberalization that results in an increase in income can generate more resources for improving environmental quality. But the role of institutional and democratic reforms should not be ignored as they are necessary for the people to articulate their preferences for environmental quality and thereby influence the political decision-making process.

Environmental standards *per se* do not hamper trade creation; standards are needed to reduce risk to health or life of plants, animals and humans. Standards are also necessary for the smooth functioning of anonymous exchanges as they help provide information for the efficient function-

ing of markets. International standards also lead to technical compatibility across countries and convey information to consumers about products that have been produced abroad or processes that took place in some other country. Thus, besides reinforcing consumer confidence, international standards reduce transaction costs and facilitate international trade. In fact, the WTO's *World Trade Report 2005* states that standards tend to address three issues: networking externalities, information externalities – mainly for consumer safety – and environmental externalities. As regards the latter, some standards lead to partial internalization of unaccounted environmental costs. If well designed, environmental standards should encourage sustainable production and consumption patterns and methods. It is through the sharing of common standards that anonymous partners in a market can communicate, have common expectations on the performance of each other's products and trust the compatibility of joint production.

Foreign standards can sometimes also lead to exporters cleaning up their production processes. An interesting case is that of South Africa's citrus industry, which made significant changes in its production process in response to strict United States and EU environmental and health-related standards for imported citrus fruit. Positive outcomes from such changes included decreased pesticide use (due to a move towards integrated pest management) and better working conditions (in part from less exposure to pesticides).

But the danger is that often these standards are adopted so as to exclude, rather than include, products from other countries. For example, EU standards on aflatoxin levels in peanuts – which exceed the norms set by the Codex Alimentarius, the international standard-setting body for food-related standards – engender disproportionate costs, and may be designed to serve protectionists ends. Another example of trade restriction is the ban in many countries on the use of pentachlorophenol – a fungicide used in leather tanning. This ban benefited United States companies which manufacture the only viable alternatives. Another example is limits set by some developed countries on the use of formaldehyde, glyoxal and PCP residues in textiles, driven, at least in part, by the fact that they would benefit Western holders of patents on the only known substitutes.

Compliance costs

It has been seen that a large number of regulatory measures are related to supply chains. Firms in developing countries are required constantly to adjust their production processes in response to the changing environmental regulations in their export markets that are largely in developed countries. These measures impede developing countries' trade. Studies have shown that compliance with external eco-standards often necessitates the import of inputs and technology, which raises the costs of production and the prices of outputs.[8] An econometric study using firm-level data generated from 16 developing countries suggests that standards increase short-term production costs by requiring additional labour and capital. It also suggests that a one per cent increase in investment to meet compliance costs raises variable production costs by a multiplier of between 0.06 and 0.13 per cent, a statistically significant increase.[9] While the impact is small as a share of production costs, it implies an absolute increase of a similar magnitude to the compliance cost itself.

Some examples of costs of compliance can be helpful in this regard. EU standards for the production and processing of shrimp (HACCP requirements) specify certain management and processing practices with a focus on micro-biological hazards, as well as chemical and physical hazards. For each stage of production and processing, there is a required monitoring regime to ensure compliance with these standards. The World Conservation Union – IUCN found that in Bangladesh, where shrimp is the second largest export item, to meet the standards, processors would have to spend close to $2.2 million per year, with annual government spending on monitoring and certifying compliance amounting to an additional $225,000. Another example concerns the use of azo dyes used in the leather and textile sectors in many developing countries. After certain azo dyes were found to be carcinogenic, several European countries enacted legislation

prohibiting their use in consumer goods, and these restrictions were subsequently extended across the EU. This had a significant impact on a large number of developing-country manufacturers: by September 1997 in China alone, 1,167 small town and village cluster enterprises had closed operations following the imposition of regulations. Yet another example concerns Chile, where it was found that the fixed cost involved in obtaining organic certification for wine production had significantly different impacts on small and large producers: certification costs amounted to 5 per cent of the operating cost for those with vineyards of 50 hectares, while it was 25 per cent for those with vineyards of 10 hectares.

The issue, therefore, is whether standards relating to environmental and health regulations are in effect impeding trade. Again taking the case of small-scale farmers in Bangladesh, for example, for whom shrimp cultivation is one source of income, these producers are largely unaware of HACCP requirements, and, even if they were, they would be unable to implement the stringent and expensive monitoring systems required; the monitoring systems become affordable only at a certain scale of operation. Such regulations therefore have the effect of pushing small-scale producers out of the system in favour of large producers, leading to negative impacts on sustainable development of large numbers of fishing families. While the governments in these developing countries sometimes try and help these small producers to meet the requirements of the developed countries, more often than not the developing countries lack the appropriate scientific and technical expertise to deal with the standards. They are also strapped for cash, often with large fiscal deficits, so that they are unable to give any meaningful help, technical or financial, to address such foreign regulations on a sustainable basis.

It may be argued that the fact that adjustment costs are relatively high is not by itself the most important consideration; rather, it is the benefits that can be derived from meeting new requirements which are important, and the monetary value of those benefits needs to be taken into account. However, in order to obtain benefits, huge investments become necessary. Further, there is no guarantee that once suitable changes in the production processes have been made the goods will get continued or enhanced market access, as buyers do not give any such guarantee upfront. A concomitant problem is that of shifting standards. As the exporters/producers get ready to meet a particular standard, developed countries might move to a different standard, which may be only slightly different from the earlier one, and adjusting once again to these can involve huge costs for the producers. Sometimes incremental higher standards or regulations entail a higher share of costs in total production costs, making low-value products relatively more vulnerable, and often forcing producers out of business.

Other constraints

Sometimes developing country firms also find it difficult to understand the regulatory structures of developed countries. They face capacity constraints and structural problems in this respect. The capacity constraints can include difficulties in identifying relevant ERHRs, implementing the necessary technical, institutional and procedural changes, and demonstrating compliance in a credible way. Structural problems can include lack of awareness and management of information, poor institutional capacity, weak infrastructure, a dominance of small and medium-sized enterprises in the export sector, lack of finance and insufficient access to technology. In many instances developing country firms are incompatible with the prevailing systems of production and marketing in the developed countries. Lack of infrastructure and monitoring facilities, limited technology choices and inadequate access to environmentally-friendly raw materials and information are also constraints for developing countries' firms. Removing these constraints can be financially burdensome. Moreover, the costs tend to be more formidable for small and medium-sized enterprises than for large enterprises.

Developing national strategies

No doubt the regulations that are designed to protect consumer health and the environment can have a negative impact on exporting countries, but it is neither appropriate nor effective to try to reject them. The right approach would be to analyse them (including their scientific justification), adapt to them and create conditions to meet those requirements in a way that maximizes the developmental and environmental benefits, while minimizing the adjustment costs. It is not that environmental and related health concerns are not legitimate, but regulations and standards need to be carefully designed in order to minimize their negative impacts on developing countries. There is no doubt that a proactive response to them will be important; rejecting them is not a solution, except for the limited number that can be contested under trade law. A recent World Bank report[10] identifies three types of strategies for developing countries to address evolving food safety and agricultural health standards. They are:

- Exit, which implies switching from certain markets, products or buyers to those whose standards could be more cost-effectively met;
- Voice, whereby developing countries seek to influence standards through negotiations or through formal complaints; and
- Compliance, whereby a set of legal, administrative, technical and organizational steps can be taken to conform to product or process requirements.

An "exit" strategy may not be an affordable option, given the increasing number of standards introduced by both developed and developing countries, and the fact that trade promotes development. It can be a short-term strategy, but not a sustainable one. "Voice" can be an important strategy but that also needs to be dovetailed into a proactive "compliance" strategy, which is a key strategy for most developing countries. This option seeks to provide a long-term solution to overcoming supply-side constraints by putting an appropriate structure in place.

Since most developing countries have limited resources, it is important for them not to spread their valuable resources too thin by tackling the problem on all exportable items in the "compliance" strategy. Instead, they should identify, as a starting point, some commodities that are of key actual or potential export value, and concentrate efforts on them. The idea is to turn environmental standards into opportunities. An active governmental role is an important part of this adjustment strategy. There is a need to establish a mechanism for getting the information on foreign environmental standards and releasing this in a timely manner to industry through industry associations. It is also important for developing countries to be able to participate in consultations held in export markets in the development phase of new standards. To succeed, exporters need knowledge of markets and marketing channels, and the ability to mount strong marketing efforts. They also need appropriate support from their governments, which should not be limited to financial support alone. Success will also depend on the ability to overcome obstacles in the form of differing standards in different markets, costs and difficulties in conformity assessment, and structural problems in supply chains.

In sum, a possible strategy for national governments could contain the following elements:

- Effect appropriate changes in the regulatory set-up for collective and collaborative actions to turn the challenges into competitive opportunities;
- Modify firm- and farm-level production, post-harvest processing and treatment technologies in some key sectors or for the main commodities;
- Seek appropriate mentoring partners in these identified sectors or commodities;
- Strengthen information management systems to keep up-to-date on new requirements and develop a system for information dissemination to exporters and other stakeholders;
- Participate in international standards-setting bodies, develop national standards and strengthen accreditation and certification systems;
- Invest in physical infrastructure to build capacity for compliance, including testing facilities, risk analysis and assessments;

- Build information and skill capacity for influencing standards developments in key export markets through active participation in pre-standard-setting consultations;
- Improve coordination between industry and standards institutes so as to encourage industry to carry out research and analysis to support standardization activities;
- Push for mutual recognition agreements with trading partners based on the principle of equivalence.

Developing countries can also formulate strategies for developing or facilitating access to alternative regional markets. South-South trade is a growing area, and these countries are increasingly forming different trade partnerships. Developing countries should consider accessing each other's markets, rather than only concentrating on exports to developed countries.

In addition, it is well worth exploring a novel feature that has recently been introduced by the European Commission in the new Regulation on Official Food and Feed Controls. Article 50 of this Regulation – *Support for developing countries* – contains three elements:

- The EU may offer technical assistance to developing countries on request;
- The EU shall provide aid to support developing countries in building the required institutional capacity; and
- Developing countries may request a phased introduction of the EU regulation's import conditions, taking into account the progress made in building institutional capacity through the EU's aid programmes.

This explicit linkage between a longer transition period, the EU's support for institutional capacity building and its impact on the ground could be regarded as a more advanced and valuable form of S&D treatment. This trend is encouraging, as Article 50 was created as a result of an ex-ante impact assessment of the new regulation on exporting developing countries. This underlines the importance of such assessments, and that developing countries need to insist on their preparation.

Do environmental and health requirements undermine free trade objectives?

The key question, therefore, is whether environmental and health requirements undermine free trade objectives. Certainly, they have the potential of being turned into non-tariff barriers. On the other hand, if there is collaboration and cooperation in realizing the free trade objective through active participation in pre-regulation and pre-standard-setting consultations, harmonization and equivalence, support by developed countries to adjustments in developing countries, and an emphasis on providing technical assistance for capacity building in developing countries, the free trade objective can definitely be achieved. In that case, ERHRs will not be considered as impeding trade. Indeed, as Hoffmann and Rotherham contend, in the short run the application of the ERHRs may be trade distortive, but in the long run it may actually lead to more trade. In fact it has been suggested that the adoption of ERHRs will in the long run lead to sustainable development and benefits to the national economy in terms of enhanced resource efficiency, lower pollution intensity and higher occupational safety, among others. Diversity of standards cannot be a ground for complaints of unfairness. In fact governments are free to set appropriate public policy objectives and compete for investments in a world of mobile and scarce capital. Ex-ante assessments of the impacts of ERHRs through a largely consultative process between developing-country representatives and developed countries' industries is a good suggestion, as improved product safety, reduced environmental harm and better public health are both a national and an international public good.

Patrick Mallet

Executive Director, International Social and Environmental Accreditation and Labelling (ISEAL) Alliance

Developing-country producers often lack an adequate framework and infrastructure to support their participation in the development and implementation of voluntary environmental requirements. As Hoffmann and Rotherham indicate in their chapter, "there are no clear rules of process that have to be followed in their development and implementation [of voluntary Environmental and Related Health Requirements (ERHRs)]"and "as they can emanate from a multitude of sources, they are much harder to track and harmonize." One of the primary objectives of the ISEAL Alliance is to support the development of this framework in order to ensure credibility and accessibility in voluntary standards and labelling instruments.

This commentary focuses on emerging responses to the need for a framework and supporting infrastructure, specifically for *voluntary* instruments. While the mechanisms for engaging stakeholders in the development of *mandatory* standards are weak and not fully realized, at least there is an existing framework for them within the WTO that could be strengthened. The same is not true for voluntary standards and, as the authors state, "not only are voluntary requirements growing in number and evolving quickly, if they become integrated into supply chains... they can become commercial imperatives for certain markets."

Hoffmann and Rotherham clearly make the case for the need for more action and better coordination to enable developing-country producers to take greater advantage of the opportunities created by ERHRs. With the increasing belief that traditional mechanisms for addressing these issues, such as those of the WTO, have been ineffective, has come a growing recognition of the necessity for other forums and mechanisms to fill this role. The UNCTAD Consultative Task Force (CTF) on Environmental Requirements and Market Access for Developing Countries is a useful response. Among its strengths is its ability to convene key stakeholders from both the regulatory and voluntary standards sectors to work together to coordinate action in these areas. The participation of the ISEAL Alliance in this forum is a reflection of our members' desire to find mechanisms to promote credible and accessible voluntary certification as a legitimate market tool for socially and environmentally beneficial production.

In terms of addressing the constraints, the authors suggest that developed-country actors should assume a major share of the responsibility. Since many developing countries lack the appropriate infrastructure to benefit from new ERHRs, these ERHRs "will have a proportionally greater impact on the competitiveness of companies in developing countries than on those in [developed countries'] own jurisdictions. This implies a responsibility for developed countries to undertake all reasonable efforts to reduce the [negative] impact of ERHRs..." Actions need to be taken at different stages in the development and implementation of voluntary standards. Among the most important actions highlighted in the chapter are the need for transparency, stakeholder consultations, ex-ante impact assessment and technical assistance for capacity building. Specifically for voluntary ERHRs, the lack of action (or ability) within the WTO to address concerns about these instruments "heightens the need to consider other mechanisms for ensuring that voluntary ERHRs are not inappropriately prepared, adopted and implemented."

Transparency and stakeholder consultation are central elements in the standard-setting practices of ISEAL Alliance members. The member organizations subscribe to the ISEAL Alliance Code of Good Practice for Setting Social and Environmental Standards, which has been widely recognized as a useful international reference document for voluntary standard-setting practices. As part of compliance with the Code, standard-setting organizations are required to engage in an open and transparent process that seeks to achieve consensus among a balance of interested parties. The stakeholder consultation practices of ISEAL member organizations are among the most

comprehensive undertaken by voluntary standard-setting organizations. They are guided by the underlying principles that the standards should reflect the interests and priorities of those stakeholders that will be affected by implementation of those standards, and that the standards need to be locally applicable wherever they are implemented.

While the ISEAL Alliance seeks to promote transparent and balanced stakeholder consultation as part of credible standard-setting practices, it is often difficult for voluntary standard-setting organizations working at an international level to reach potential stakeholder groups. One reason is that voluntary instruments lack formal mechanisms which could enhance their credibility. Technical regulations, on the other hand, can be notified to TBT enquiry points and ISO national information points. One question that requires further consideration is whether this could be an option also for voluntary standards, as a mechanism for increasing awareness about new standards and participation in the standard-setting process. At present, voluntary standard-setting bodies are reticent to notify TBT enquiry points, given the prevailing uncertainty concerning the legitimacy of voluntary process and production method (PPM) standards in the WTO and under the TBT Agreement. While it is now generally recognized that voluntary instruments fall outside the purview of the TBT Agreement, certain actions, such as reference to voluntary instruments in public procurement and, potentially, notification to the TBT enquiry points, could bring these voluntary standards more within the scope of the Agreement. However, uncertainty over how voluntary PPM standards would be treated within the WTO framework makes it unlikely that voluntary standard-setting organizations will gear up to face this challenge. In this context, the UNCTAD CTF provides a useful forum for voluntary standard-setting organizations and national governments to discuss these outstanding uncertainties and reach agreements that will enable standard-setting bodies to further improve the breadth and effectiveness of their transparency and stakeholder consultation practices.

In the absence of absolute knowledge about how voluntary standards would be interpreted under TBT Agreement provisions, ISEAL member organizations have sought to be as compliant as possible with the relevant provisions in the Agreement, namely its Annex III. The ISEAL Code of Good Practice is based in large part on Annex III, but is adapted to make it more appropriate for voluntary social and environmental standards. The underlying principles of openness and transparency remain central features of the Code. One important element of the TBT Agreement that is more explicitly defined in the ISEAL Code is the obligation that measures "not be more trade-restrictive than necessary to fulfill a legitimate objective" of the standard. This is a complex notion that underlies one of the primary objectives of both the TBT Agreement and the UNCTAD Consultative Task Force, namely to reduce the potential barriers to market access caused by environmental and health-related requirements. As Hoffmann and Rotherham state, "there are no specific benchmarks or criteria in [the TBT] Agreement for justifying the need for ERHRs per se" and that developing countries "assert that the 'legitimate objective' notion of the TBT Agreement is too vague"

In the Guidance to the ISEAL Code, legitimate objectives include "environmental protection, human health or safety, animal or plant life or health, labour and social welfare, and cultural considerations." This language is similar to that used in the main text of the TBT Agreement and goes beyond the shorter text of its Annex III. Of the objectives listed in the ISEAL Code, labour and social welfare, and cultural considerations do not appear in the TBT Agreement. Additionally, the Code states, "The standard-setting organization is ultimately responsible for determining whether an objective is legitimate…" This places the onus on the standard-setting body to justify the legitimacy of the objectives of its standard. Perhaps more importantly, it emphasizes the need for an effective stakeholder consultation mechanism to ensure that the objectives are desirable and appropriate to those stakeholders that could be affected. This is a participatory approach to standard-setting that moves the discussion beyond which types of objectives are legitimate to the process by which the legitimacy of objectives is determined. I believe that this is a helpful method by which to reconcile social and environmental objectives with trade objectives.

Compliance with standards that are appropriate to the local context should not be more onerous for developing-country producers than for their developed-country counterparts. However, there is an inherent level of support that is required for all entities seeking certification – support that is often absent in developing countries. Moreover, it is commonly the case that small and medium-sized enterprises face greater relative costs in coming into compliance with certification requirements. One of the most widespread constraints to accessing the benefits of voluntary certification remains the lack of producers' knowledge about applicable standards and their organizational capacity to meet the requirements of a standard and the accompanying auditing process. As Hoffmann and Rotherham note, technical assistance for capacity building needs to address "an inability to identify the requirements, access or afford required technology, make changes to production techniques, or demonstrate compliance in a credible way." In addition, and probably as important, is the lack of institutional capacity within many developing countries to deliver certification services and the infrastructure necessary to assist producers to become compliant. Both of these realities suggest a need for institutionalization of support for technical assistance and capacity building.

What remains unclear, and could potentially be addressed through the UNCTAD CTF, is how to further institutionalize this support. One of the major constraints of voluntary instruments is the lack of clarity surrounding who is ultimately responsible for delivering technical assistance related to certification. While it is a conflict of interest for certification systems to engage in capacity building of entities that will later seek certification, there is often no other organized framework through which to deliver this assistance. As suggested in the paper, the CTF could serve as a useful forum for "exchanging national experiences on the development of holistic, proactive strategies in developing countries that effectively respond to ERHRs in key export markets".

Beyond this, however, it is necessary to examine the actual delivery mechanisms for technical assistance, and to find ways of improving both the coordination and the institutionalization of this assistance. To date, much of the assistance has been delivered by NGOs and development agencies of developed-country governments, supported by foundations and national governments. However, private companies are also beginning to deliver technical support in the context of their supply chains. Significant drawbacks of this approach are the lack of coordination between these various mechanisms and their limited scale. The support is not nearly comprehensive enough to lift developing countries and small and medium-sized enterprises up to a level playing field. It will be important for the CTF to find ways of increasing this technical assistance to support compliance, not only with technical regulations but also with voluntary standards that are becoming influential market requirements. Ideally, assistance would be coordinated through an intergovernmental body that has the capacity and resources to ensure widespread implementation.

The UNCTAD Consultative Task Force has the potential to support a new kind of dialogue on both voluntary standards and technical regulations that engages actors who have not previously had a forum for such discussions. The paper by Hoffmann and Rotherham clearly identifies a number of factors that need attention in this new dialogue. The value and importance of voluntary ERHR instruments in the global economy is set to continue to increase in the coming years and the ISEAL Alliance will continue to engage in actions to address the accessibility and credibility of these voluntary instruments. In this context, the UNCTAD CTF is a valuable forum.

Gareth Steel and Julius Langendorff
European Commission

The chapter by Ulrich Hoffmann and Tom Rotherham makes an important contribution to our understanding of the challenges facing producers and exporters in developing countries. They bring off what is not easy: a broad and balanced analysis of both the regulatory and the non-regulatory aspects of EHRHs. Furthermore, the possible solutions they propose have the merit of being based on dialogue and cooperation rather than confrontation. In analysing the current situation and trends, and then pointing (explicitly or implicitly) to what needs to be done, and what is being done, they suggest a new direction for future work.

Broad and balanced analysis

Starting with the general analysis in the chapter, we particularly welcome the way the writers use real world trends to examine how trade interacts with the pursuit of sustainable development. They make three vital points. Firstly, that imposing ERHRs is increasingly not simply a governmental process, but one involving others acting in and on the supply chain. These include non-governmental bodies and companies that do not just place orders but also make stipulations about production conditions. Secondly, that it is mostly inaccurate to see ERHRSs as trade protectionism, as in the vast majority of cases such requirements respond to genuine environmental and public health concerns and preferences on the part of public authorities and consumers. And thirdly, that developing-country exporters are faced with increasing complexity as "new regulations and standards often deal with health, food safety and environmental (increasingly also supplemented by social) requirements at the same time". Let us comment in a little more detail on these three points.

The supply chain is today more than ever linked to the actions of and reactions to consumers in the marketplace. These consumers may have a better or less well-informed perception of what extra value they are securing through supporting certain "voluntary" standards. Thus there is a role for governments and public bodies to take an interest in the efficiency and honesty of that process. What is said elsewhere in the chapter about the need to involve a wide range of stakeholders, especially developing-country stakeholders, in the elaboration of governmental standards also applies to this role of the authorities in developed countries. A wide range of stakeholders needs to be drawn into the process of helping consumers see the reality of what lies behind the various claims made about products. Transparency in the marketplace in the North should in turn lead to greater predictability and stability of requirements for producers in the South.

It is gratifying to see that the authors do not – as sometimes happens in debates of this nature – lose perspective and depict EHRHs mainly as attempts to protect domestic markets. Although they refer to "concerns" and "suspicion" on the part of developing countries' exporters that ERHSs may be misused to protect domestic markets, the chapter does not dwell too much on such suspicions. In reality, the overwhelming majority of EHRSs are introduced in response to genuine environmental and related health concerns; and the issue at stake is often a serious one. The often quoted EU WEEE and RoHS Directives are a case in point: they are designed to tackle the very rapidly increasing waste stream of electrical and electronic equipment in Europe (currently more than eight million tonnes a year) and to prevent the spread of hazardous substances such as various heavy metals (lead, mecury, cadmium and hexavalent chromium) and brominated flame retardants. It is worth noting that these and other environmental problems are not exclusive to developed countries: developing countries are also becoming increasingly aware of the fact that for development problems to be solved and economic growth to last, such growth must be environmentally sustainable. For instance, as is highlighted in chapter 2 of this *TER* by Vossenaar et al., policy-makers in rapidly industrializing Asian countries such as China, Malaysia, the Philippines and Thailand face increasing amounts of *domestic* EEE waste, and realize that this problem needs to be adequately addressed.

Whilst chapter 1 of this *TER* highlights the increasing complexity of regulations and standards, the analysis remains confined to "environment and related health requirements". Not only may this term convey a slightly misleading message, given that the bulk of EHRSs are actually not environment-related (at least not in the conventional sense of the word), it also fails to reflect other key components of sustainable development such as labour standards or human rights issues. In reality, the complexity of aspects addressed by regulatory standards is at least matched and probably exceeded by the full range of aspects of sustainability – social, environmental and economic – that fall within the ambitions of "private" certification and labelling schemes. What began as the issue of "environment-protective" (as opposed to "trade-protective") EHRHs should perhaps rather be seen as that of "sustainability assurance claim schemes", since the common thread that links the different activities is that of a product which asserts a claim on the marketplace about one or several characteristics having to do with the consumer's or the producer's sustainable development.

Cooperative and holistic solutions

Turning now to the solutions suggested by the authors, the positive and cooperative approach they take to these issues is certainly to be welcomed. Given the vital need to protect key public policy interests, the EC's position is that, as it argued in its October 2004 submission on environmental measures and market access to the WTO, "the answer to concerns about reduced market access is not to weaken such standards but rather to enable exporters to meet them".[11] Against this background, we also welcome the mandate of UNCTAD's Consultative Taskforce on Environmental Requirements and Market Access for Developing Countries, according to which "its activities are not intended to "second-guess" the legitimacy and objectives of environmental requirements, nor to develop guidelines for good regulatory practice".

Of course, the above should in no way be read to imply that trade and development considerations should not be given due attention when ERHR legislation is being developed.[12] In this connection, the European Commission's Better Regulation package, introduced in 2001, can play a useful role, as it requires, among other things, the systematic use of stakeholder consultation and the ex-ante assessment of economic, social and environmental impacts. In carrying out such pre-legislative work, it is naturally important to ensure that account is taken of impacts on third countries, alongside effects on actors within the EU that often attract the most attention. In recognition of this, the Commission's recently revised guidelines on ex-ante impact assessment now refer more explicitly to the need to pay attention to the effects of EU legislation on developing countries.

While such pre-legislative work is important, continuous efforts must also be made to feed the results of ex-ante ("upstream") analysis into ex-post ("downstream") activities, for instance in the form of trade-related technical assistance and capacity-building. Another challenge is to ensure sufficient coordination between related TA & CB activities so that limited resources yield the most value added. In all these – and many other – respects, Hoffmann and Rotherham raise important issues that merit further reflection and discussion.

Unresolved issues

It is not surprising that in this complex area the paper raises some issues along the way which do not appear to be fully resolved. The concluding section of the analysis of where we are now is surely right to argue that ERHRs, especially but not exclusively private voluntary ones, are now largely supply-chain-driven. But earlier, and perhaps in the underlying premise of the chapter, there is a suggestion that we need to be able to tell whether a standard is trade protectionist or environment-protective. The conclusion about the supply chain driving the whole process (and, in turn, the underlying role of the consumer in the market place behind that) could be taken further to argue that the "*procès d'intentions*" – the search for clarity on whether the true motivation and

intention behind a particular development was environment protective or trade protectionist – is increasingly irrelevant. The reality is that private actors are translating the needs of the marketplace, and the issue is quite simply how to make it easier for developing-country suppliers to participate in that market.

Thus in some ways this chapter is important both for what it says and for what it does not say. What it does say very clearly, and this should be welcomed, is that voluntary standards can have the effect of mandatory standards, and that government and international responses therefore need to take their existence into account. But it does not pose the question of how governments can do that: how they can move from a position of pulling levers in their own domain – of regulation, financial assistance, institution-building – to one of interacting successfully with private actors and actions in the supply chain and in the marketplace. The only pattern that is contemplated is that of forcing supply-chain issues into an "intergovernmental setting", rather than asking governments to consider how best they can cooperate with, interact with and influence, the non-governmental setting.

Fortunately, the section on UNCTAD's Consultative Task Force on Environmental Requirements and Market Access for Developing Countries does show how the mould of purely intergovernmental thinking is being broken, using for example the idea of developing regional codes of good practice to feed into the EurepGAP initiative, or using an Internet portal to organize and make transparent the requirements of the different systems. These pointers strike an optimistic note for future developments.

Notes to Commentaries

[1] The author would like to thank Otto Genee and Bert Vermaat of the Netherlands Ministry of Foreign Affairs and Ariane van Beuzekom of the Dutch Centre for the Promotion of Imports from Developing Countries (CBI) for their comments on an earlier draft of this commentary.

[2] The term 'standard' in this commentary is used to cover both voluntary standards developed by international, national or private standard-setting bodies and mandatory regulations set by government regulators. The same applies to conformity assessment procedures to establish compliance with a certain standard or regulation.

[3] Legal obligation: Article 178 of the EC Treaty: "The EU shall take account of the objectives [of its development policy] in the policies that it implements which are likely to affect developing countries." http://europa.eu.int/eur-lex/lex/en/treaties/dat/12002E/htm/12002E.html. Political priority: Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee (COM(2005) 134 final) *Policy Coherence for Development: Accelerating Progress Towards Attaining the Millennium Development Goals,* http://europa.eu.int/comm/development/body/communications/docs/communication_134_en.pdf and the Conclusions of the General Affairs and External Relations Council.

[4] The Code of Good Practice in annex 3 of the TBT Agreement offers private standards bodies guidance on the standard-setting process, but on a voluntary basis. Such bodies are only expected to publish their work programme twice a year.

[5] An example is the Asia Trade-related Technical Assistance Trust Fund, established in 2004, co-financed by the Commission and managed by the International Trade Centre in Geneva. It is a flexible instrument that can deliver short-term expertise, upon request, within two months. Its communication on Policy Coherence for Development (see above) mentions the intention to develop a rapid intervention facility to deal specifically with SPS problems in developing countries.

[6] See: Negotiating history of the coverage of the Agreement on Technical Barriers to Trade with regard to labelling requirements, voluntary standards, and processes and production methods unrelated to product characteristics (G/TBT/W/11, 29 August 1995).

[7] Humphrey, J. and Schmitz, H., Governance in global value chains, in H. Schmitz (ed.), *Local Enterprises in the Global Economy*, Cheltenham, Edward Elgar, 2004, pp 95-109.

[8] Final summary of the Re-governming Markets E-Conference, accessible at: www.regoverningmarkets.org/discussions.html.

[9] Bharucha V, The impact of environmental standards and regulations set in foreign markets on India's exports, in: Jha V, Hewison G and Undenhills M, eds., *Trade, Environment and Sustainable Development: A South Asia Perspective*, London, Macmillan Press, 2000.

[10] Maskus KE et al., The costs of complying with foreign product standards for firms in developing countries: an econometric study, Washington, DC, World Bank, 2004.

[11] World Bank, Food safety and agricultural health standards: challenges and opportunities for developing country exports, Washington, DC, 2005.

[12] WT/CTE/W/239 of 12 October 2004, point 3.

[13] An overview of how the European Commission and the EU Member States try to address these concerns is given in two EC submissions to the WTO (CTE), of 5 September 2003 (WT/CTE/W/231) and 12 October 2004 (WT/CTE/W239).