



# Implementing Environmental, Health and Safety (EH&S) Standards, and Technical Regulations

## The Developing Country Experience

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# Introduction

Developing countries made it clear during the negotiations in Doha that their attitude towards the new Round of WTO trade talks would depend on the amount of attention given to outstanding implementation issues. One of the areas that were singled out for attention was the implementation of the Agreement on Technical Barriers to Trade (TBT Agreement).

As tariff levels have dropped with the successful implementation of the WTO's binding schedules, non-tariff (or technical) barriers to trade have become relatively more important for developing country market access. The TBT Agreement established rights and obligations that seek to ensure that standards and technical regulations do not unnecessarily restrict trade. Experience to date suggests that, without certain basic institutional infrastructure, developing countries cannot benefit from the provisions in the TBT Agreement. Indeed, without these institutional capacities, standards and technical regulations can restrict trade whether or not a company or product is in compliance with the relevant requirements.

A growing list of environmental, health and safety (EH&S) standards and technical regulations threaten to restrict developing countries' access to OECD markets. Without adequate infrastructure in place to deal with these standards and technical regulations, companies in developing countries may find their export markets restricted, not because of an unwillingness or inability to comply, but because of an inability to either identify relevant requirements, implement the necessary institutional and procedural changes, or demonstrate compliance in a credible fashion.

EH&S requirements are intended to promote public goods in support of sustainable development. If they also unfairly restrict market access, then they may harm economic development—one of the three pillars of sustainable development. As governments increasingly turn towards market-based tools to promote sustainable production and consumption, including eco-labels and certification systems, efforts must be made to ensure that these do not harm trading opportunities for companies in developing countries. The implementation of the TBT Agreement should be of particular concern to those interested in sustainable development and the relationship between trade and the environment.

This paper will review some developing countries' experience implementing EH&S standards and technical regulations, and will try to identify where problems exist. It will argue that, in a fundamental way, EH&S requirements are no different from other product quality requirements: both are required for market access and both are developed and implemented within a complex framework of "quality institutions." This section will also describe these institutions that make up the quality assurance regime at the national, regional and international level.

The paper will also review some of the available experience on the impact of environmental and health and safety standards and technical regulations on exporters, drawing from casework undertaken by the UN Conference on Trade and Development (UNCTAD) and the Organization for Economic Cooperation and Development (OECD). The paper will highlight where problems exist, discuss examples of initiatives to address these problems and suggest priorities for future work.

Although the paper will focus principally on institutional capacity issues, it will also consider the WTO's Agreement on Technical Barriers to Trade (TBT Agreement) and its Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), which are the most important international legal frameworks for addressing these types of barriers to trade.

## The quality institutions

With the extension of international sourcing practices and “just-in-time” production and distribution strategies, companies have recognized the risk that their entire production lines might be delayed by the delivery of a few bad component parts. As a result, suppliers have had to find ways to ensure that their goods and services are accompanied by the necessary quality assurances.

Over time, a relatively complex institutional structure has developed at the national, regional and international levels to accommodate the growing focus on quality assurance. This structure is based on the three “quality institutions”: rule making (standardization and regulation); conformity assessment; and accreditation. Together, these institutions play an important role in facilitating international trade and investment by enabling producers both to establish what is required of them, and to credibly demonstrate their compliance with a wide variety of quality standards. But without certain basic institutional infrastructures in place, companies may not be able to access quality assurance regimes. This can lead to important technical barriers to trade.

The importance of quality assurance is no longer strictly limited to physical product quality and technical requirements. As environmental and social issues are increasingly integrated into individual purchasing decisions and into corporate sourcing requirements, a new range of quality assurance demands has been placed on suppliers. Just as with product quality, so too have environmental and social quality assurances become important for access to many markets, particularly in developed countries. Sometimes these assurances are made mandatory through regulation; in many cases they simply involve voluntary standards that are required by discerning consumers, or that support market segmentation strategies.

The same basic institutional infrastructures that are key for the implementation of technical product quality assurances are also the foundation for environmental and social quality assurances. Without adequate infrastructure in the three quality institutions, companies— particularly those in developing countries—may not be

able to access information on the relevant requirements, nor will they be able to credibly demonstrate compliance with them. At its extreme, this can lead to a situation where environmental and social quality requirements unfairly restrict market access.

As mentioned above, there are three institutions that form the basis of any quality assurance regime:

- **rule making**, including the development of mandatory technical regulations and voluntary standards;
- **conformity assessment**; and
- **accreditation**.

A company needs to understand and have access to each of these institutions if it is to avoid the technical barriers to trade that can often be related to quality assurance requirements. With globalization, the architecture of each of these institutions is increasingly being built at the international level. But without a sound national infrastructure, most countries will find it difficult to participate in the international activities.

## **Rule making: standards and technical regulations**

Standards and technical regulations are documents that clearly list the commonly accepted guidelines, rules and criteria that help to determine if a product, process or service is suitable for its intended purpose. If they are clearly defined and easily obtained, standards and technical regulations enable companies to communicate quality requirements with their suppliers and customers precisely, consistently and efficiently. Whereas standards are voluntary (usually set by purchasing companies, or non-governmental standardizing bodies), technical regulations are mandatory (usually set by governments); the WTO's TBT Agreement sets out slightly different requirements for the development of standards and technical regulations.

Most countries have designated national bodies that develop standards and technical regulations, and that also provide other services, such as information on standards and regulations being developed in other countries of importance to the export sector. In general, there is a value in having a limited number of these bodies in order to facilitate coordination, and to reduce the number of competing or overlapping standards or technical regulations. Almost every country in the world has a designated national standards body (NSB) that is mandated to oversee the development of voluntary standards. In some cases, NSBs are also involved in the development of mandatory technical regulations, or the standards that they develop are used as the basis for technical regulations. Only a government body can formally establish a mandatory technical regulation.

In developed countries, national standards bodies (NSBs) are frequently private organizations with close links to the private sector user-community. In developing

countries, NSBs are frequently public bodies with close links to other government agencies, and may be responsible for developing both national standards and technical regulations. The vast majority of standards are developed through NSBs but, increasingly, a host of private, non-governmental organizations (NGOs) are taking the lead in the development of environmental and social standards. To date, no environmental or social standard developed by a private standards body has been adopted as a mandatory technical regulation.<sup>1</sup> Also, while most NSBs also participate in International Standards Bodies (ISBs), very few NGOs do.

## Types of standards

Discussions that address standards and technical regulations from a trade policy perspective have traditionally identified two main types of standards: product-related standards that influence the physical characteristics of the final product, and process and production method (PPM) standards that govern the process by which a product is made and traded.<sup>2</sup> Although this may be a useful model in the context of trade law, it is not particularly useful for considering the real-world obstacles imposed on companies by standards and technical regulations. This paper instead distinguishes between standards and technical regulations based on their intended purpose, and identifies two main purposes: the promotion of trade, and the promotion of public policy objectives. In both cases, there is growing pressure to harmonize the requirements at the international level through the development of international standards.

**Trade promotion:** Some standards and technical regulations are solely intended to promote trade. For example, in some industries, such as the automotive industry, a significant percentage of the product components are produced outside of the country of final assembly. Often, these components must be produced to exacting technical specifications, be it in terms of size, durability, strength or even colour. Trade over long distances in component parts is complicated by difficulties in clearly communicating these technical requirements. Guidelines that clearly define technical product specifications and that can be used and interpreted consistently can help to overcome communication problems and, in so doing, facilitate international trade. Most trade promotion guidelines are standards set by the industry itself and are voluntary.

It is important to note that the most important aspect of trade-promotion standards is that an accepted set of requirements exists, not necessarily that these

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<sup>1</sup> It should be noted that, in some cases, governments have adopted policies to encourage the application of environmental or social standards. For example, the Chinese government has integrated the Forest Stewardship Council's (FSC) sustainable forest management standards into its national forest strategy.

<sup>2</sup> For more on the distinction between product- and PPM-based standards, see OECD, Paris, "Processes and Production Methods (PPMs): Conceptual Framework and Considerations on Use of PPM-Based Trade Measures," available at [http://www.oilis.oecd.org/oilis/1997doc.nsf/LinkTo/ocde-gd\(97\)137](http://www.oilis.oecd.org/oilis/1997doc.nsf/LinkTo/ocde-gd(97)137); Howse, Robert (2000), "The Product/Process Distinction – An Illusory Basis for Disciplining 'Unilateralism' in Trade Policy," *European Journal of International Law*, 11, No. 2, 2000; and Charnovitz, Steve, (2000), "Solving the Production and Processing Methods Puzzle," WTO Series No. 5, Occasional paper of the Program for the Study of International Organizations, Graduate Institute of International Studies, Geneva.



requirements be set at a specific level. For example, there is nothing inherently “right” about the fact that the dimensions of a piece of A4 paper have been defined as 8.27 in. x 11.69 in. The value of the codification of the dimensions lies in the fact that A4 has become a simple and universally accepted means of communicating a specific set of dimensions for sheets of paper. Without this codification, and the international relationships that it enables, it would be significantly more difficult to export paper products, printers, photocopiers and fax machines. In this respect, the guideline for A4 paper is primarily intended to promote trade.<sup>3</sup>

**Public policy promotion:** Although they may also happen to facilitate trade, many other standards and technical regulations are primarily intended to achieve a broader public policy objective, such as environmental protection or safeguarding human health and safety. Because of their impact on public goods, the codification of many of these types of guidelines has traditionally been done through technical regulation. However, particularly in the field of environmental protection and social development, governments have been shifting away from command and control approaches and towards market-based regulation. This has been accompanied by a shift towards the development of more voluntary standards.

Whereas the effectiveness of a standard or technical regulation intended to promote trade may be related more to the actual existence of an agreed set of documented specifications than to the appropriateness of those specifications, as noted in the A4 example above, the actual specifications are extremely important for the effectiveness of a public-policy standard or technical regulation. For example, in contrast to the dimensions of A4 paper, the actual dimensions of the holes in a filter for purifying water are extremely important. Whereas holes with a diameter less than one micron will successfully filter out waterborne diseases such as giardia and amoebic dysentery, holes that are even 0.5 microns larger may not. The mere existence of an accepted set of guidelines is not enough in this case—the guidelines must be appropriate.

The distinction between trade promotion and public policy promotion is an extremely important background to discussions on the trade implications of environmental standards because, although there are several fundamental differences between their characteristics, they depend on the same quality assurance institutions<sup>4</sup> and are governed by many of the same legal regimes. Although many of the weaknesses that exist in these institutions and legal regimes do not create problems in the context of trade promotion, they do create problems in the context of public policy promotion.

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<sup>3</sup> In the short-term, the specific requirements of a trade promotion standard may well have important trade implications, since it may require companies to retrofit production processes and technologies in order to produce products that satisfy new technical specifications. This can have important cost implications. But from a long-term perspective, discounting investments that have been made to accommodate new production requirements, the most important issue is that a common standard for communicating product requirements exists at all.

<sup>4</sup> The quality assurance institutions discussed in this paper are: rule making (standards and technical regulations), conformity assessment and accreditation.

## Conformity Assessment

Conformity assessment is the process of testing compliance with a standard or technical regulation. Access to conformity assessment services enables companies to demonstrate that they comply with the relevant requirements. Depending on the circumstances, it can be undertaken through a process of independent verification (third-party or also commonly referred to as ‘certification’), buyer review (second party) or self-declaration (first party). Depending on the sort of standard or technical regulation, conformity assessment services may be provided by laboratories and testing facilities with specialized metrology equipment, or by management system certification companies.

In developed countries, conformity assessment is generally undertaken by a large number of competing commercial entities. In many developing countries, where the market for conformity assessment is not as large, these services are provided by relatively fewer entities, and are frequently state-sponsored labs and testing facilities.

For technical regulations, conformity assessment is generally undertaken through third-party verification by entities that have been given the mandate to monitor regulatory compliance by a government agency. This is not always a public body. For standards, conformity assessment can either be through first-, second-, or third-party verification<sup>5</sup>. Third-party verification or certification is undertaken by any number of (generally) private companies that have been granted a licence in the country in which they wish to operate. Importantly, certifications granted by a conformity assessment body in one country may not necessarily be recognized in other countries. Thus, companies may sometimes have to obtain multiple certifications and pay for multiple verification procedures, if they intend on selling into more than one market.

## Accreditation

Accreditation is defined as a procedure by which an authoritative body gives formal recognition that a body or person is competent to carry out specific tasks.<sup>6</sup> When assessing the competence of conformity assessment bodies, accreditation agencies generally assess their competence against procedural guidelines. These guidelines are set, and the assessments are generally undertaken, by national accreditation agencies that are either part of a government agency, or specifically mandated by one. A conformity assessment body cannot operate in a country, or test against a specific standard, unless they have been licensed by the relevant accreditation agency. Although it is not always the case, particularly in developing countries,

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<sup>5</sup> First-party verification is provided by the company itself and involves a self-declaration of conformity; second-party verification is generally undertaken by an interested party, such as a corporate customer with a supply contract; third-party verification is undertaken by trained professionals working for independent verification companies.

<sup>6</sup> ISO/IEC Guide 2.

international best practice recommends a division of responsibility between standardization, certification and accreditation activities.

Because national accreditations are not generally recognized between countries, conformity assessment bodies must seek separate accreditation for each country in which it seeks to do business. Increasingly, however, regional and international

### **Box 1: International guidance documents relevant to conformity assessment and accreditation\***

- ISO/IEC Guide 2: *General terms and their definitions concerning standardization and related activities*: International Organization for Standardization, Geneva.
- ISO/IEC Guide 58: *Calibration and testing laboratory accreditation systems – general requirements for operation and recognition*: International Organization for Standardization, Geneva.
- ISO/IEC Guide 61: *General requirements for assessment and accreditation of certification/registration bodies*: International Organization for Standardization, Geneva.
- ISO/IEC Guide 62: *General requirements for bodies operating assessment and certification/registration of quality systems*: International Organization for Standardization, Geneva.
- ISO/IEC Guide 65: *General requirements for bodies operating product certification systems*: International Organization for Standardization, Geneva.
- ISO/IEC 17010: *General requirements for bodies providing accreditation of inspection bodies*: International Organization for Standardization, Geneva.
- ISO/IEC 17020: *General criteria for the operation of various types of bodies performing inspection*: International Organization for Standardization, Geneva.
- ISO/IEC 17025:1999: *General requirements for the competence of testing and calibration laboratories*. International Organization for Standardization, Geneva.

\* The author would like to thank David Stanger for providing this list.

frameworks are being developed to promote the mutual recognition of different national accreditations. Some private standards and labelling initiatives, such as the International Federation of Organic Agriculture Movements (IFOAM) and the Forest (FSC) and Marine Stewardship Councils (MSC), have set up independent accreditation bodies outside of the formal accreditation system in order to maintain control over the quality and supply of certification services for their standards.

## **The international architecture**

Inconsistent or ambiguous rules create a climate of uncertainty that can reduce the efficiency of business decisions. For example, if a technical regulation limiting the emission of carbon changes frequently over time, it is very difficult for a company to conduct accurate cost-benefit analyses when deciding, for example, to purchase cleaner production technology. A high degree of temporal inconsistency in quality requirements is bad for business and can disproportionately raise the costs of compliance.

In the same way, a high degree of geographical inconsistency is also bad for business. It is expensive and complicated for a company to operate multiple production runs to produce goods that need to comply with different quality requirements in each different export market<sup>7</sup>. While international trade provides opportunities for companies to benefit from important economies of scale, a proliferation of different standards and technical regulations can drastically reduce these benefits. In the same way, different guidelines by which conformity assessment or accreditation is conducted can also create barriers to trade. The overall goal of the international quality assurance community is to promote a system whereby products are “once tested, once certified, accepted everywhere.” The international harmonization of rule making, conformity assessment and accreditation procedures, is extremely important if a global quality assurance system—be it for product quality assurances or environmental and social quality assurances—is to facilitate trade.

### **Once tested: the harmonization of rule making**

The most straightforward way to reduce the costs of proliferating standards and technical regulations is to create a single set of rules. Indeed, the TBT Agreement has an explicit bias towards international standards. It requires members to base all national standards and technical regulations on existing international standards,<sup>8</sup> and also encourages members to participate in the development of international standards.<sup>9</sup> By requiring members to use international standards as the basis for national rules, be they voluntary or mandatory, the WTO is promoting international harmonization and reducing the risks to business of a proliferation of different quality requirements. Of course, this raises the question of what should be considered an international standard.

Up until recently, an international standard was quite straightforward: an international standard was any document developed through an international standards body (ISB), and an ISB was any international body whose membership was open to all national standard bodies.<sup>10</sup> Most international standards are developed within a select group of formal international standards bodies. The most important of these traditional ISBs have specific jurisdictions—thus the International Telecommunications Union is the recognized forum of the

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<sup>7</sup> There are two issues here. First, it is possible that the requirements for different markets are substantially different in scope and require companies to address more or fewer issues. Second, it is possible that the requirements are substantially similar in scope but require companies to comply with different levels of performance. In the case of the latter, companies can simply accommodate the different markets by complying with the more stringent set of requirements. However, this may lead to a situation where market requirements for large export markets become de facto international requirements.

<sup>8</sup> TBT Agreement, Article 2.4; and Annex III, paragraph F.

<sup>9</sup> TBT Agreement, Article 2.6; and Annex III, paragraph G.

<sup>10</sup> It is important to note that international standards are not developed by international standards bodies, but rather through them. An ISB is simply a rules-based forum that facilitates negotiations between national standards bodies. Thus, ISO and Codex do not develop international standards; their members develop them. ISO and Codex simply oversee the development process and then publish them as international standards.

development of international standards for telecommunications, and the FAO's Codex Alimentarius Commission is the forum for the development of international food safety standards.<sup>11</sup>

In recent years, however, international trade policy has shifted so that the focus is no longer on the ISB itself, but rather on the process through which international standards are set.<sup>12</sup> This is an important development, because it effectively broadens the number of bodies that can develop international standards recognized under the TBT Agreement, making it more difficult for countries to follow and influence all international standardization activities.

Of course, countries and their national standards body representatives cannot always agree to a common set of requirements. In addition, countries have recognized that two standards that are substantively different can still achieve the same overall objective. So, where international standards cannot be agreed, but where different standards can achieve the same objective, the TBT Agreement recommends that members consider recognizing each other's standards as technically equivalent. Especially where domestic environmental, social and economic characteristics or technological capacities are different and require slightly different standards, this is, in principle at least, a useful way of reducing the costs of the proliferation of standards and technical regulations.

However, while there is a strong institutional infrastructure for the negotiation of international standards—in terms of the number of traditional ISBs and in terms of the consensus-based procedures for the development of international standards outside of the ISBs—there is only a limited, international infrastructure for the negotiation of technical equivalence agreements, and this only in the case of sanitary measures associated with food import and export inspections.<sup>13</sup> As a result, and although this is a very important policy tool, particularly in the case of public-policy standards and technical regulations that need to be refined to suit local conditions and priorities, it is rarely used in practice.<sup>14</sup>

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11 As recently as 1991, UNIDO estimated that over 85 per cent of all international standards were developed through just three ISBs: the International Telecommunication Union, the International Electrotechnical Commission and the International Organization for Standardization (ISO).

12 This is the case for the TBT Agreement. The guidelines for international standards setting included in Annex 4 of the Second Triennial Review of the TBT Agreement outline criteria for determining if a standard should be considered international. The SPS Agreement, which addresses a far more limited scope of issue—essentially limited to food safety—lists three bodies that it recognizes as international standards bodies: the FAO's Codex Alimentarius Commission, the International Organization of Epizootics and the Plant Protection Convention.

13 At its meeting of February 25 – March 1, 2001, in Brisbane, Australia, the Codex Committee on Food Import and Export Inspection and Certification Systems published a "Draft Guidelines on the Judgment of Equivalence of Sanitary Measures Associated with Food Inspection and Certification Systems," which helps to create a structure for the establishment of equivalence between sanitary measures, which it broadly characterizes as including: infrastructure; program design, implementation and monitoring; and/or specific requirements. See the Codex Committee on Report of the Tenth Session of the Codex Committee on Food Import and Export Inspection and Certification Systems; April 2002, ALINORM 03/30, Appendix III.

14 For more on the role of an international framework for technical equivalence agreements, please see: Rotherham, Tom: "Market Access, Sustainable Management Standards and Technical Equivalence"; paper prepared for the Global Forum on Trade, Environment and Development, June 23–27, 2002, Quito, Ecuador.

## **Once certified: harmonization of conformity assessment**

Different countries often impose different rules for testing compliance, even against the same standard or technical regulation. Therefore, even if a harmonized international standard or technical regulation exists, market access can nonetheless be restricted by a proliferation of conformity assessment procedures, which could require companies seeking access to a variety of different markets to undertake and pay for a variety of different compliance tests.

A variety of bodies develop international standards for conformity assessment, including traditional ISBs, such as ISO's Committee on Conformity Assessment (CASCO); conformity assessment trade associations, such as the International Laboratory Accreditation Cooperation (ILAC); or UN agencies, such as the World Health Organization (WHO). In other cases, national conformity assessment procedures, or even procedures promoted by industry associations, can become de facto international standards for conformity assessment due to their prevalence in the marketplace.

Where no internationally-adopted approach exists, the WTO TBT Agreement requires that members consider recognizing conformity assessments done according to different procedures, so long as they are deemed equally effective.<sup>15</sup> This process is referred to as "mutual recognition" and is analogous to the technical equivalence agreements that are negotiated between countries with different product standards and technical regulations.

Whereas there is a limited international institutional framework to support the negotiation of technical equivalence agreements, there is a more developed framework for the negotiation of mutual recognition agreements. For example, Annex 5 of the Second Triennial Review of the TBT Agreement contains an "Indicative List of Approaches to Facilitate Acceptance of the Results of Conformity Assessment," which are intended to facilitate the negotiation of mutual recognition agreements between governments.<sup>16</sup> Also, Codex's "Draft Guidelines on the Judgment of Equivalence of Sanitary Measures Associated with Food Inspection and Certification Systems" addresses the equivalence of conformity assessment procedures.<sup>17</sup>

## **Accepted everywhere: harmonization of accreditation**

Even if there is a single international set of rules (or a technical equivalence agreement in place), and a single internationally-accepted set of conformity assessment procedures for testing against that standard or technical regulation (or a mutual recognition agreement in place), it is still possible that a certification issued

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<sup>15</sup> TBT Agreement, Article 6.1.

<sup>16</sup> WTO/G/TBT/9, November 13, 2000: "Second Triennial Review of the Operation and Implementation of the Agreement on Technical Barriers to Trade."

<sup>17</sup> Report of The Tenth Session of the Codex Committee on Food Import and Export Inspection and Certification Systems; April 2002, ALINORM 03/30, Appendix III.

by a conformity assessment body in one country will not be accepted in another. This is because of the incomplete harmonization of accreditation procedures, and the lack of recognition of different accreditation structures.

As mentioned above, accreditation is the process of determining the competence of bodies that conduct conformity assessments, and is usually undertaken by a single accreditation agency in each country. A certificate of compliance with a standard or technical regulation will only be accepted if the company that has undertaken the conformity assessment is accredited, or registered, by the national accreditation agency. Therefore, if a quality assurance is required to access a particular market, the actual certificate of assurance often may have to be granted by a company that is registered by the domestic accreditation agency. This can result in increased costs for exporters, who must import conformity assessment services from the country to which they intend to export goods.

Since the mid-1990s, efforts have been made to harmonize the accreditation process. In particular, this includes the multilateral recognition arrangement (MLA) framework developed by the International Accreditation Forum (IAF) and the International Laboratory Accreditation Cooperation (ILAC).<sup>18</sup> Signatories to the IAF and ILAC MLAs are obliged to recognize any conformity assessor that is accredited by any of the other signatories and, therefore, to accept conformity assessments provided by those companies. In return, signatories have the right to undertake a peer review of each other's accreditation processes, including at the regional and international level in order to ensure their ongoing competence and effectiveness. The IAF MLA framework has been developed for the accreditation of companies that provide quality management system, personnel and product certification services. However, ILAC expands the scope of this framework to cover organizations that provide laboratory and calibration services. IAF and ILAC are jointly drafting procedures for the accreditation of inspection services.

The IAF and ILAC frameworks are perhaps the most important developments in quality assurance harmonization in the last decade. However, although it enables accreditation agencies in different countries to enter into recognition agreements with one another without heavy bureaucratic obstacles, there is nonetheless a baseline minimum of technical and institutional capacity that an agency must have in order to be accepted into the agreement. A significant amount of institutional capacity building and technical assistance are needed to bring many developing country accreditation agencies into the IAF-ILAC framework.

## **The Regional architecture**

Under the international architecture, there are a growing number of regional initiatives to upgrade the quality assurance institutions. This is focused largely on the more traditional technical product standards and management systems, but

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<sup>18</sup> For more information see: [www.iaf.nu](http://www.iaf.nu) and [www.ilac.org](http://www.ilac.org).

investments here will have carry-over benefits for environmental and social quality assurances as well. There is, however, an uneven focus to this regional cooperation.

Other than the European Union, which has the Comité Européen de Normalisation (CEN), there is presently very little regional cooperation on standardization, either in terms of the development of common regional standards or the negotiation of regional positions on international standards. A UNIDO project in l'Union économique et monétaire ouest-africaine (UEMOA) is one exception, where efforts are being made to harmonize standards within the region. This is an area where developing countries may be able to cooperate more in the future.

There is somewhat more regional cooperation on conformity assessment, but still not a very large amount. This may largely be due to the fact that in many countries the conformity assessment community is composed of competing private companies. The UNIDO/UEMOA initiative, for example, is providing technical assistance and capacity building for a range of quality institutions, including helping testing laboratories upgrade technical competence to levels required for accreditation.

There is, on the other hand, a high degree of regional cooperation for accreditation, including the Pacific Accreditation Council (PAC), the InterAmerican Accreditation Commission (IAAC), and the Southern Africa Development Cooperation on Accreditation (SADCA). Cooperation on accreditation is facilitated both by the emerging international infrastructure and by the fact that each country generally has a very limited number of accreditation agencies—in many cases, only one.

## Implementation problems

The preceding sections presented a generic overview of the three institutions that are required to create a foundation for quality assurance. This section will review some of the implementation problems that developing countries encounter, highlighting examples from specific case studies on environmental and organic agriculture standards wherever possible. It is important to remember, however, that in many cases the institutional framework for addressing standards and technical regulations that promote public policy—such as environmental requirements or organic agriculture standards—cannot be separated from the generic quality institutions needed for those that promote trade. It is therefore important to address both types of rules and institutions.

### Implementation problems: standards and technical regulations

There are three general categories of issue that give rise to implementation problems at the level of standards and technical regulations:



1. transparency, access to information and participation in the development process;
2. technical capacity to implement; and
3. international standards and technical equivalence

### **Transparency, access to information and participation in the development process**

Without access to information, neither countries nor companies can deal effectively with the standards and technical regulations that many be required for market access. At a very basic level, if a country is not informed about the existence of a technical regulation, it will not be able to warn its export industries, and the industries may find that their products are turned away at the border. At a more refined level, if a national standards body does not have a ready-built network of stakeholders, it may not be able to solicit comments on draft standards within the required time limits.

The main source of rules and guidance on the development of technical regulations and standards is the WTO's TBT Agreement,<sup>19</sup> which influences the development of national and international standards, and national technical regulations. Although the TBT Agreement sets out a very robust framework for the development of standards and technical regulations,<sup>20</sup> there are important deficits in the implementation of their rules and guidelines. In most cases, the problem is not with the rights and responsibilities set out in these rules, but with the capacity to take advantage of them.

Problems with the development of standards and technical regulations have to do with breakdowns in communication. Communication is like a chain—it is only as strong as its weakest link. In the case of the development of standards and technical regulations, there are five important links in the communication chain:

1. The developer of the standard or technical regulation must communicate with other WTO members. This is done through the WTO's notifications procedure in the case of technical regulations, or through ISONET in the case of standards.
2. Any WTO member concerned with the development of the standard or the technical regulation must communicate with the relevant national stakeholders, to ensure that they are aware of the measure and have adequate opportunity to comment during the allocated time period.
3. The concerned domestic stakeholders, be they public or private entities, must communicate their concerns in the form of written comments to their national enquiry point or national standards body.

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<sup>19</sup> The SPS Agreement contains similar provisions to the TBT Agreement on transparency, access to information and participation.

<sup>20</sup> For a list of the relevant provisions, please see Annex I.

4. The comments must be communicated back to the WTO member or national standards body that is developing the document.
5. The standard developer or technical regulation developer must indicate any action that it has taken in response to the comments received.

Although most developed country WTO members have well developed national standards bodies, effective enquiry points and notification procedures, many developing country members have neither the capacity to disseminate the notifications to relevant national parties, nor to assess the technical regulation's potential impacts on trade and to convene a national process to document relevant comments. This is especially relevant for informal sectors of the economy and small and medium enterprises that are not represented at the national level by industry associations. A recent report on the awareness in the Philippines of ethical issues important to the EU states that:

“In general, the textile industry has no or very limited knowledge of ethical issues in the EU, (...), especially with regard to market trends and requirements. There are, however, major differences in awareness between big and smaller companies. [Big] companies have little information problems (...). A major reason for the limited knowledge about ethical issues in the EU is that the Philippine textiles/garments industry mainly consists of SMEs.”<sup>21</sup>

The variable impact on large and small producers has been noted in several instances, and is an important consideration. Low levels of industry concentration, in terms of geographic distribution and in terms of company size, render effective communication more difficult and therefore can increase the costs to national standards bodies. Strong national industry associations can help resolve these problems. For instance, in 1995, UNIDO helped to establish the Eastern and Southern African Leathers Industry Association (ESALIA), which helped to increase awareness of European chemical-use restrictions among small-scale leather goods producers, and to coordinate technical assistance projects.

Without a well-resourced national standards body, including a network of contact points in national industry associations and companies, it is very difficult to raise awareness or to solicit comments on technical regulations or standards—regardless of one's rights under the TBT Agreement. Even in those cases where the relevant standards have been created by NGOs, not by the organizations that make up the traditional national and international standards infrastructure, the traditional infrastructure has an extremely important role in acting as a communications hub. Evidence suggests that increased recognition and cooperation between these two communities could help to improve communications and reduce technical barriers to trade.

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21 CBI-CREM: Dutch Centre for the Promotion of Imports from Developing Countries, and the Consultancy and Research for Environmental Management (2000) “‘Ethical’ issues in the EU: Opportunities and Threats for Exports from the Philippines,” Results of an identification mission, Amsterdam. Quoted in draft OECD case study on Formaldehyde Standards; on file with author.

## Technical capacity to implement

Of course, knowing about a standard is not even half of the battle. In many cases, compliance with quality specifications requires a certain amount of technical capacity. In some instances, this may mean that specialized production technologies are required, requiring short-term investments in expensive equipment that may not even be available locally. For example, a Marine Stewardship Council (MSC) peer assessment of the blue crab fishery in the Philippines Sulu Sea would have required a series of expensive genetic tests to determine whether the stock being fished by the local population was distinct from the larger stock of blue crab in the region. This was deemed prohibitively expensive, and the fishery could therefore not obtain MSC certification.<sup>22</sup> Similarly, it is reported that stringent and variable pesticide residue regulations for food products in European Union countries increase the costs of analysis and create barriers to trade because Indian companies are not able to invest in processing units and upgrading the technical competence of laboratory technicians.<sup>23</sup>

In others cases, specialized management techniques may be needed to implement a standard. For example, some environmental standards, such as the Forest Stewardship Council (FSC) and the Marine Stewardship Council (MSC), require that companies have in place a chain-of-custody management system that enables them to trace individual products back through the production process. Also, the need to segregate organic from non-organic produce along the production and distribution chain may mean that if small-scale farmers choose to market their produce as organic, they may no longer be able to benefit from the scale economies provided by cooperatives and marketing boards, unless these organizations make expensive process changes to ensure that goods can be segregated.

There are three general problems in this area: 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 small- and medium-sized enterprises (SMEs). Second, the required equipment or management expertise may just not be available locally, and local companies may not have the capacity to conduct international searches for suitable suppliers. And third, even where equipment or consulting services are available locally, they are most likely to be produced externally and can therefore be more expensive than in developed countries. Thus, even when companies in developing countries are able to implement standards, the costs of compliance are likely to be higher than for competitors in developed countries.

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<sup>22</sup> See draft OECD case study; outline on file with author.

<sup>23</sup> See Kithu, Charles J.; Deputy Director, Indian Spices board: "Issues On SPS And Environmental Standards For India," paper presented at UNCTAD/IDRC Conference, available at [http://www.unctad.org/trade\\_env/test1/meetings/standards/charles.doc](http://www.unctad.org/trade_env/test1/meetings/standards/charles.doc).

Without technical assistance and capacity building initiatives, it has been found that many environmental standards place a larger financial burden on companies in developing countries than on their counterparts in the developed world. Although the WTO TBT Agreement requires members to give technical assistance to countries that face difficulties implementing mandatory technical regulations (see

## **Box 2: Technical assistance provisions in the TBT Agreement**

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

- 11.1 the preparation of technical regulations;
- 11.2 the establishment of national standards bodies, and participation of these bodies in the international standardizing bodies.
- 11.3.1 the establishment of regulatory bodies, or bodies for the assessment of conformity with technical regulations;
- 11.3.2 information on how to implement technical regulations;
- 11.4 the establishment of bodies for the assessment of conformity with standards adopted within the territory of the requesting Member;
- 11.5 the steps that should be taken by their producers if they wish to have access to systems for conformity assessment operated by governmental or non-governmental bodies within the territory of the Member receiving the request.
- 11.6 the establishment of the institutions and legal framework that would enable them to fulfill the obligations of membership or participation in regional or international systems of conformity assessment.

Box 2), it is unclear if the scope of the Article 11 provisions would include all aspects of voluntary standards.<sup>24</sup> In any case, to date, no developing country has made a request for technical assistance through the Article 11 provisions, so it is difficult to assess its usefulness.

## **International standards and technical equivalence**

The TBT Agreement promotes the harmonization of standards and technical regulations, in particular through the use of international standards and, where possible, technical equivalence. Members are required to use international standards unless they can demonstrate that the international standard would be inappropriate or ineffective due to specific circumstances, such as geographic or climatic conditions. However, because developing countries often do not have the resources to either demonstrate that international standards are inappropriate to local circumstances or to develop their own standards, many countries effectively become international standards-takers.

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<sup>24</sup> See TBT Agreement, Article 11.3.2. Because governments are not responsible for the development of all standards, they cannot be held financially responsible for their trade effects. At the same time, standards bodies have neither the resources nor the capacity to provide technical assistance and training wherever it may be needed. This is an important gap in accountability, but it is unclear how it can be filled.

Like national standards, international standards are primarily developed by private sector actors, but companies in developing countries are much less involved in international standardization activities than are their developed country counterparts. This is due to a number of issues, including the fact that companies in developing countries are standard-takers for requirements of their principal export markets; that domestic companies do not necessarily have the financial and human resources needed to participate in international standards activities; and developing country standards bodies do not have the resources required to engage effectively with domestic constituents or to participate in international standards bodies.

The preponderance of companies from developed countries in international standards bodies has two important results. First, the kinds of international standards that are developed are most often those that respond to developed country priorities, not to developing country priorities. For example, it has been argued that a lack of an international standard for formaldehyde limits on textiles has led to the proliferation of different national requirements with little consistency either in terms of quantitative levels or approach<sup>25</sup>. This has made it more difficult for developing country producers to identify relevant standards, and to accommodate the requirements of different export markets.

Similarly, a Colombian submission to the WTO's Committee on Trade and Environment (CTE), commenting on the proliferation of national environmental standards on cut flowers in Europe, noted that the lack of international standards made it very hard to harmonize these standards, making it necessary for Colombian exporters to meet—and to demonstrate compliance with—different criteria for different labelling programs.<sup>26</sup> Although cut flower and textile exports are extremely important to many developing countries, they apparently do not have the institutional, technical or financial resources required to initiate the development of relevant international standards.<sup>27</sup>

Second, even where international standards respond to developing country needs, their specifications are more likely to be suited to large, capital-rich, multinational companies rather than to labour-intensive SMEs. For example, the ISO technical committee in charge of developing the ISO 14001 environmental management system standard has identified, as an important strategic priority, the need to ensure

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25 See OECD Case Study; on file with author.

26 Colombia, Government of (1998), "Environmental Labels and Market Access: Case Study on the Colombian Flower-Growing Industry," Document Nos. WT/CTE/W/76 and G/TBT/W/60, March 9, 1998, World Trade Organization, Geneva, Switzerland. Quoted in draft OECD Case Study on cut flowers; on file with author.

27 In many cases, proposals for new international standards must be accompanied by a commitment from a country to provide secretariat support services, which 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.

that future revisions of ISO 14001 consider the particular needs of SMEs as well as developing country stakeholders.

Without considerable technical and financial assistance, the difficulties that developing countries have with involvement in international standards bodies can be expected to become more serious in the future. As mentioned earlier, Annex 4 of the Second Triennial Review of the TBT Agreement marks an important shift in international trade policy. This shift takes the WTO away from defining international standards bodies, and towards defining a process through which many bodies can develop international standards. This can be expected to lead to a much greater dispersion of international standards activity, making it even more difficult for countries, developed and developing alike, to participate in all international standards activities.

Where international standards do not exist on which technical regulations can be based, the TBT Agreement encourages members to enter into technical equivalence agreements with members who have adopted technical regulations that, although they may be substantively different, effectively achieve the same objective. To date, WTO members have had very little success in negotiating equivalence agreements on technical regulations—and in truth, there has been very little effort made in this area. But, considering the importance of fine-tuning public policy technical regulations to local economic, social and environmental conditions, these should be an important tool for environmental, health and safety standards, in particular.

Recent experience suggests that, with an enabling international framework, technical equivalence agreements could be a powerful tool for reducing technical barriers to trade. Notably, however, the TBT Agreement requires that members make efforts to promote technical equivalence agreements for technical regulations only, and not for standards.

International standards can play an important role in the facilitation of technical equivalence agreements by providing a common template for the development of national standards. The Codex international standard on organic agriculture acts as this sort of template. It does not contain a complete list of specifications, but instead provides a common roadmap that different countries can fill in with their

### **Box 3: Technical assistance for NGO-initiated standards – the case of the Marine Stewardship Council**

The Marine Stewardship Council (MSC) was established in 1996 through a partnership between the World Wide Fund for Nature International (WWF-International) and Unilever SA/Nv, a consumer goods retailer and one of the world's largest buyers of frozen fish. The goal of the MSC is to protect global fish stocks by promoting sustainable fisheries management, as well as creating economic incentives for responsible fisheries. In consultation with experts, including through eight regional workshops with stakeholders in developing countries, the MSC developed a standard for sustainable fisheries management against which companies could be certified, giving them the right to use the MSC eco-label on fish products.

The MSC came under strong criticism from developed and developing countries alike. Critics did not believe that a single standard could be effectively applied to all fisheries in the world. In addition, many argued that the high costs of certification would hurt small artisanal fisheries, ones that were by their nature more sustainable than large-scale "factory-fisheries" that could afford certification.

In response to these criticisms, the MSC embarked on three initiatives:

1. The MSC is trying to identify indicators of sustainability that are equally rigorous as those used to assess northern fisheries, but that require fewer bio-economic data or data that are less expensive to obtain.
2. The MSC is itself pursuing new avenues of funding to cover the costs of certification. In addition to establishing a fund for certification, the MSC has obtained development assistance funding from the Netherlands Organization for International Development Co-operation to fund the costs of certification at a fishery in Eritrea.
3. The MSC has initiated a program to enhance the auditing and certification infrastructure in various fishing regions, particularly those that do not currently possess organizations capable of undertaking these tasks. This has included annual workshops, which focus on training and the upgrading of fishery certification skills to increase greater competition among certifiers, and thus lower the costs of certification.

own, locally-defined, specifications. The Japanese technical regulation on organic agriculture also includes a facility through which countries can get their national standards recognized as technically equivalent, including the organic standards developed by the International Federation of Organic Agriculture Movements (IFOAM). In the same way, the Forest Stewardship Council has promoted its international standard on sustainable forest management as a technical equivalence agreement framework. Countries use the international framework standard to develop their own national FSC standards, which address the relevant principles and criteria in a way that is appropriate to the local context.

## **Implementation problems: conformity assessment**

As mentioned, conformity assessment is the act of testing compliance with quality requirements, be they voluntary standards or mandatory technical regulations. The conformity assessment infrastructure consists of testing and metrology laboratories, and companies that provide certification services. Depending on the type of tests being done, conformity assessment often requires a high degree of technical expertise as well as expensive testing equipment. Companies in countries with poor conformity assessment infrastructure face two main problems at this stage of the quality assurance regime: high relative cost of conformity assessment services, and poor recognition in other markets.

### **High costs of conformity assessment services**

There are a number of reasons why companies in developing countries may be subject to more expensive testing and certification costs, but the principal reason is related to supply. Whereas there is a high cost associated with the proliferation of competing standards bodies and accreditation agencies, conformity assessment services are most efficiently provided by a competitive industry made up of many actors. These actors can be either public or private bodies, but are most frequently a mix of the two. In developed countries, conformity assessment is almost entirely a private sector activity.

Any company that has been approved by an accreditation authority—which is responsible for assuring the technical competence and consistency of conformity assurance services—is able to provide testing and certification services within its jurisdiction. But due to the high initial investments required to acquire testing and metrology equipment, as well as the need for highly-specialized staff, which could be in short supply, these start-up costs must either be amortized over a long period of time, or over a large number of clients. Apart from a lack of capital to invest in start-up costs, the market for conformity assessment services in many developing countries is just too small to support a competitive industry, and capital costs are just too high to permit long payback periods.

As a result, conformity assessment services are frequently provided either by a limited number of public bodies or by foreign service-providers. A low supply of service providers raises costs in a number of ways. Companies may face long delays in getting products tested and export licences issued, or may have to pay a premium to foreign companies. In some cases, the nature of the conformity assessment regime itself tends to limit competition and keep prices high. The Forest Stewardship Council, for instance, forbids any company from assessing conformity against its sustainable forest management standard if this company also audits companies against other sustainable forest management standards. Especially in developing countries, where the supply of conformity assessment services is already low, and exporters may need to obtain different certifications to access different markets, this policy increases technical barriers to trade in forest products.



In some cases, as well, proof of certification may have to be indicated on the product itself using a label. This can significantly add to the financial costs and technical difficulties involved with complying with a measure. For example, while the costs of certification under the eco-labelling program set up by the Flower Campaign—a group of German NGOs and consumer organizations—have been estimated to be as low as US\$2,500 per year, exporters must also pay US\$1 per label for each crate of exported flowers. This could raise costs by as much as an additional US\$20,000 per year for some producers. The producer generally assumes these costs, since few eco-labels command a significant price premium.<sup>28</sup>

### **Poor recognition in other markets**

There is another, even more important obstacle to the establishment of domestic public or private conformity assessment providers—there is no guarantee that the certificates that they issue will be accepted in the target export markets. In part due to legitimate concerns regarding low levels of technical capacity in developing countries and the consequent inconsistency of test results, and purportedly due to pressure from large multinational laboratories and certification companies seeking to limit competition, many countries do not accept certificates of compliance issued by companies that have not been accredited by their own domestic accreditation agency.

The Japanese regulation on organic agriculture provides an interesting example of how mutual recognition and foreign licensing agreements can help to overcome problems in the supply of conformity assessment services.<sup>29</sup> As well as defining the quality and process requirements, the Japanese technical regulation defines who can undertake conformity assessment services. It is a best practice example of how to promote high supplies of conformity assessment services (see Box 4).

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<sup>28</sup> See draft OECD Case Study on cut flowers; on file with author.

<sup>29</sup> Drawn from draft OECD Case Study on Organic agriculture; on file with author.

The Japanese example follows the framework set out in the TBT Agreement. This requires that countries give positive consideration to accepting conformity assessments undertaken in other countries even if they are conducted according to different procedures, but only so long as the relevant bodies demonstrate “adequate and enduring technical competence.”<sup>30</sup> Without an international benchmark guideline outlining the minimum technical requirements, it can be very difficult for accreditation agencies in developing countries to even know how to go about demonstrating adequate technical competence, much less achieve it. The Japanese system is flexible enough that it gives companies a variety of options when seeking certification, including after export. The TBT Agreement also encourages members to enable foreign conformity assessment bodies to participate in their domestic industries “under conditions no less favourable than those accorded to bodies

#### **Box 4: Maximizing the supply of conformity assessment services in the Japanese organic agriculture regulations**

The Japanese technical regulation on organic agriculture defines who is able to undertake conformity assessment services, but does so in a flexible way that ensures an adequate degree of technical competence and maximizes the supply of conformity assessment services in exporting countries. The Japanese law lists four categories of company that can become registered to undertake certifications:

1. Any conformity assessment body based in Japan can undertake audits as long as it satisfies the requirements set out and it has been accredited by the national authority.
2. For a fee, conformity assessment bodies in other countries can obtain accreditation from the Japanese authorities, as long as they are located in a country that has been determined by the Japanese authority as having an equivalent system. These companies can also undertake conformity assessments in third countries, as long as they indicate the scope of their planned activities at the time of registration.
3. Raw agricultural products to be imported into Japan for further processing can be certified by any recognized certifier in the country of export, and then re-certified by a registered Japanese company after processing.
4. Any registered company, either in Japan or in another country, can enter into a “trust contract” with companies in other countries as long as the company is recognized by a national, regional or international organization with established reliability, including the International Organic Accreditation Service (IOAS).\*

\* The IAOS is the accreditation body for the International Federation of Organic Agriculture Movements (IFOAM), the main NGO body involved in organic agriculture standards and labelling.

located within their territories.”<sup>31</sup> The Japanese system enables any accredited company to undertake conformity assessments in any third country.

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<sup>30</sup> TBT Agreement, Article 6.1.1.

<sup>31</sup> TBT Agreement, Article 6.4. It should be noted that it is most often developed country conformity assessment providers that enter developing country markets, and that these are most often private companies.

Unfortunately, best practice is more often the exception than the rule, particularly with private, non-governmental standards. In a 1998 report to the WTO's Committee on Trade and Environment (CTE) and Committee on Technical Barriers to Trade (CTBT), the Colombian government commented on European eco-labelling initiatives for cut flowers. It raised a concern that determinations of compliance, which are very important for market access, were being undertaken by private organizations "with no qualification as international certifiers and without being subject to any kind of international standards."<sup>32</sup> Many of the private, non-governmental, environmental and social certification and labelling programs control the supply and quality of auditors, including the Forest Stewardship Council (FSC), the Marine Stewardship Council (MSC) and the International Organization for Organic Agricultural Movements (IFOAM).

## **Implementation problems: accreditation**

As mentioned, one of the main obstacles to increasing the size of the available pool of conformity assessment service providers is the fact that certificates granted in one country are not always recognized in other countries. One of the main reasons for this is the perception that some national accreditation agencies are not effective enough.

Accreditation agencies are responsible for overseeing the competence and consistency of the testing, metrology and certification services within a country. Some developed country accreditation agencies believe that insufficient institutional capacity, technical expertise and financial resources mean that some developing country accreditation agencies do not keep a close enough eye on the national conformity assessment infrastructure. Without trust in the oversight of the testers, it is hard to have trust in the quality of the testers, or in the reliability of the tests.

There is a concerted effort being made by the international quality assurance community to develop a robust institutional framework to rationalize the accreditation process. This particularly includes activities undertaken by the International Accreditation Forum (IAF), the International Laboratory Accreditation Cooperation (ILAC), and the ISO Committee on Conformity Assessment (ISO CASCO). As described earlier, these organizations are heading up a comprehensive initiative to develop international guidelines and standards that will provide a foundation for communicating procedural requirements and for demonstrating competence. The IAF and ILAC are also developing international multilateral recognition agreements (MLA), which have already greatly facilitated the recognition of management system certifications across national boundaries, and will eventually include a similar framework for product testing and metrology.

But even the best international framework does not change the fact that certain basic assistance is needed if accreditation agencies are to have the technical and

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<sup>32</sup> From draft OECD case study on cut flowers; on file with author.

institutional capacity needed to benefit from it. The problems related to accreditation will ultimately not be resolved without significant investments to help developing countries acquire the required technologies and technical capacity. Although the TBT Agreement requires that members provide technical assistance to help developing country members to establish bodies for the assessment of conformity for both technical regulations and standards (see Box 2), to date there have been no requests for assistance from developing countries. It is, therefore, very difficult to assess the adequacy of the Article 11 provisions. The European Union recently submitted to the TBT Committee a list of all of the technical assistance work that it has funded<sup>33</sup>—but, in general, the provision of technical assistance to all developing country members has been insufficient. This is a difficult issue, since the scope of the problem is large and relatively undocumented.

## Conclusion

Standards and technical regulations present barriers to trade at the level of each of the three quality assurance institutions: rule making (standards and technical regulations); conformity assessment; and accreditation. Indeed, even the relatively small number of case studies that have looked into the barriers imposed by environmental standards have shown that very real problems exist at each level.

There is a variable range of complexities associated with each of the quality assurance institutions. The development and implementation of standards and technical regulations involves the most actors—including governments, companies, industry associations and consumer groups in importing and exporting countries—and therefore the range of problems that appear at this level are the most numerous and complicated to address. The assessment of conformity involves fewer actors, and is therefore slightly less complicated. The provision of accreditation services involves the fewest actors, and is perhaps the most straightforward to address. Of course, without sufficient levels of technical assistance, no kind of barrier to trade can be easily overcome.

It is beyond the scope of this paper to propose priorities for action to further reduce the barriers to trade. There has been no shortage of research and conferences held on this topic. The most important lesson to be drawn from this paper is that, without greater investments in the quality assurance institutions, quality assurance requirements of all kinds will continue to impose barriers to trade on developing countries. Not only will this reduce the trading opportunities of developing countries, it will also begin to discredit the kinds of policy tools that are increasingly being used to promote sustainable development: eco-labels, certification programs and other market-based tools.

Developing countries must take the initiative to convene national consultation processes to assess their priority needs, and to consider proposals for how they can

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33 Available at [http://docsonline.wto.org/gen\\_search.asp](http://docsonline.wto.org/gen_search.asp) (search for document symbol: G/TBT/W/188).

be addressed. TBT implementation must also be integrated into national economic development and poverty reduction strategies, so that bilateral donors and development assistance agencies hear of these needs from their national contact points. In particular, developing countries must begin to use the Article 11 provisions, which enable them to request funds from developed country members to address many of the relevant technical assistance needs. Then, in reaction to the proposals that emerge from this process, developed countries must acknowledge their obligations under Article 11 of the TBT Agreement and begin to invest more in technical assistance to developing countries. There is no other credible alternative.

In commenting on the weaknesses in the implementation of environmental standards and other types of quality assurances, it is important to note that, while the institutional infrastructure has been in place for many years, the legal infrastructure governing it has only been in place in its present form since 1995, when the Uruguay Round was completed and the TBT Agreement was adopted. In the intervening years, much has been done to understand the implications of the quality assurance regime and the need for technical assistance and capacity building for rule making, conformity assessment and accreditation. To date, however, very little has been done to actually address these—now well-understood—gaps. This should be a priority for developing and developed countries in the Doha Round of trade negotiations.

# Annex 1: The WTO Agreement on Technical Barriers to Trade: standards, technical regulations and the quality institutions

This annex outlines the key elements of the TBT Agreement as they relate to the development of standards and technical regulations. It is an indicative list of the relevant provisions, which is intended to give a general sense of the types of issues that they addressed and the capacities required to implement and benefit from the TBT Agreement.

The TBT Agreement is a complex legal document and its provisions must not be read in isolation of either the entire scope of the TBT Agreement nor the GATT text itself. This is not a detailed legal analysis and thus should not be considered exclusive or authoritative.

## Technical regulations

The TBT Agreement contains many provisions that are intended to prevent (mandatory) technical regulations from becoming unnecessary barriers to trade. These provisions recommend best practice, and also outline procedural requirements.

### Best practice:<sup>34</sup> technical regulations

The TBT Agreement describes the conditions under which a technical regulation is rebuttably presumed not to create an unnecessary obstacle to trade, i.e., if it is prepared, adopted or applied for one of the legitimate objectives explicitly mentioned in Paragraph 2,<sup>35</sup> and is in accordance with relevant international standards (2.5).

It also describes several principles of best practice that are mandatory: technical regulations shall not be more trade-restrictive than necessary to fulfill a legitimate objective, taking account of the risks non-fulfillment would create (2.2), nor shall they be maintained if the circumstances or objectives giving rise to their adoption no longer exist or if the changed circumstances or objectives can be addressed in a less trade-restrictive manner (2.3). Where the international standard is not appropriate, the technical regulation must nonetheless be based as closely as possible on the international standard (2.4). Wherever appropriate, members shall

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<sup>34</sup> The term “best practice” is used in a conceptual fashion here and is not meant to suggest that the provisions are not mandatory; in reality, most of this “best practice” is required.

<sup>35</sup> 2.2 (...) Such legitimate objectives are, inter alia: national security requirements; the prevention of deceptive practices; and protection of human health or safety, animal or plant life or health, or the environment.

also specify technical regulations based on product requirements in terms of performance rather than design or descriptive characteristics (2.8).

Also, recognizing the need for flexibility, members shall consider accepting as equivalent technical regulations of other members, even if these regulations differ from their own, provided they are satisfied that these regulations adequately fulfill the objectives of their own regulations (2.7).

### **Procedural requirements: technical regulations**

When developing technical regulations, members must base them on relevant international standards or on their relevant parts, unless they find that they would be ineffective or inappropriate, e.g., because of fundamental climatic or geographical factors or fundamental technological problems (2.4). As soon as they are requested, members must explain the justification for technical regulations (2.5), and they must also ensure that technical regulations are made available to interested parties in other members as soon as they are introduced or published (2.11), and must allow a reasonable interval between the publication of technical regulations and their entry into force in order to allow time for producers in exporting members to adapt their products or methods of production to the requirements (2.12).

Because of the importance of international standards, members shall play a full part, within the limits of their resources, in the preparation of international standards for products for which they have either adopted, or expect to adopt, technical regulations (2.6). Whenever a relevant international standard does not exist or the technical content of a proposed technical regulation is not in accordance with the technical content of relevant international standards, members shall, at an early appropriate stage:<sup>36</sup>

- notify members of their intent to introduce a technical regulation so as to enable interested parties in other members to become acquainted with it (2.9.1);
- notify members of the products to be covered by the proposed technical regulation, together with a brief indication of its objective and rationale (2.9.2);
- upon request, provide to other members particulars or copies of the proposed technical regulation and identify the parts that deviate from relevant international standards (2.9.3); and
- accept members' written comments and discuss these comments upon request, and take these written comments and the results of these discussions into account (2.9.4).

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<sup>36</sup> 2.9.2 and 2.9.4 clarify that the meaning of "an early appropriate stage" is that it should be at a stage when amendments can still be introduced and comments taken into account.

All of the above provisions are also applied to technical regulations developed by local governments (e.g., municipal or provincial governments) and non-governmental bodies (Article 3), but there are special provisions that apply when urgent problems of safety, health, environmental protection or national security justify rapid development of technical regulations (2.10).

## **Standards**

The TBT Agreement also contains several provisions that seek to ensure that (voluntary) standards do not impose unnecessary obstacles to trade. As with the treatment of technical regulations, the provisions outline best practice and establish certain procedural requirements. However, because of the voluntary nature of standards, these are subject to slightly different provisions. The case of standards is also complicated by the fact, although many different governmental and non-governmental agencies can develop standards, the TBT Agreement only imposes requirements on governments. The TBT Agreement has no direct authority over non-governmental standards bodies. As a result, although members must ensure that their central government standardizing bodies comply with the relevant provisions (4.1), most of the provisions themselves appear in a separate annex (Annex 3: the Code of Good Practice for the Preparation, Adoption and Application of Standards, commonly referred to as the Standards Code).

### **Best practice: standards**

Although it is not explicitly stated in the TBT Agreement, it is generally accepted that voluntary requirements are less trade-restrictive than mandatory requirements. As a result, for any given set of requirements that seek to achieve any given objective, a standard would be considered a less trade-restrictive measure than a technical regulation. That said, there are still certain requirements for setting standards. Many of these overlap with the best practice requirements related to technical regulations.

First, national bodies must use relevant international standards or their relevant parts as the basis for national standards, except where this would be ineffective or inappropriate, for instance, because of an insufficient level of protection or fundamental climatic or geographical factors or fundamental technological problems (F). Wherever appropriate, the standards that specify product requirements must be based on performance rather than design or descriptive characteristics (I).

### **Procedural requirements: standards**

National bodies involved in standardization must, within the limits of their resources, participate in the preparation by relevant international standardizing bodies of international standards regarding subject matter for which it either has adopted, or expects to adopt, standards (G). If there is more than one relevant



national standards body, they must participate through a single delegation (G). These bodies must also make every effort to avoid duplicating or overlapping with the work of standardizing bodies in other countries, or with the work of international or regional standardizing bodies (H). They shall also make every effort to achieve a national consensus on the standards they develop (H).

Before adoption, the standardizing body shall provide, upon request, copies of the draft standard (M), and allow a period of at least 60 days for the submission of comments on the draft standard by interested parties within the territory of a member of the WTO (L).<sup>37</sup> The standardizing body must then take these comments into account, and must reply to comments received from other standards bodies that have accepted the Standards Code, including explanations for any deviations from relevant international standards (N). Once the standard has been adopted, it shall be promptly published (O).

At least once every six months, the standardizing body must publish a work program containing its name and address, the standards it is currently preparing and the standards it adopted in the preceding period (J). On the request of any interested party within the territory of a member of the WTO, the standardizing body shall promptly provide a copy of its most recent work program or of a standard that it produced (P).

## Other relevant provisions

The TBT Agreement also contains several provisions that seek to ensure that procedures for the assessment of conformity with standards and technical regulations do not themselves impose technical barriers to trade. These provisions are contained in Articles 5 through 9, inclusive.

A main concern of the TBT Agreement is transparency and the provision of information on applicable technical regulations and standards. As a result, it outlines several additional procedural requirements relevant to communication. These include:

- each member shall ensure that an enquiry point exists which is able to answer all reasonable enquiries from other members and interested parties in other members as well as to provide relevant documents (10.1);
- developed country members shall upon request provide English, French or Spanish, translations of the documents covered by a specific notification (10.5); and
- members shall designate a single central government authority that is responsible for the implementation on the national level of the provisions

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<sup>37</sup> This period may, however, be shortened in cases where urgent problems of safety, health or environment arise or threaten to arise.

concerning notification procedures under this Agreement except those included in Annex 3 (10.10).

Recognizing the significant institutional capacities required to implement the TBT Agreement, members are also required to provide technical assistance, on agreed terms and conditions, regarding most elements related to the implementation of the above provisions (Article 11). This includes the establishment and institutional development of national standards bodies (11.2), regulatory bodies (11.3.1) and conformity assessment bodies (11.4, 11.5), and participation in international standardization (11.2). It also includes the provision of guidance on the implementation of technical regulations (11.3.2) and involvement in regional cooperation agreements on conformity assessment (11.6, 11.7). In addition, members must provide differential and more favourable treatment to developing country members to this Agreement (Article 12).