

**Metrology, Accreditation, Standards, & Quality**  
**The Task for Developing Countries**  
**Making the Transition From a Centralized to a Market Economy**

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Standards and conformity assessment offer practical solutions to many of the problems of developing countries. Developing countries and countries making the transition from a centralized to a market economy make up some three quarters of ISO's membership and similar numbers for the World Trade Organization (WTO). For them, standards and conformity assessment are an important source of technological know-how for developing their economy and raising their capability to export and compete on global markets.

On a national level, most developing countries lack an adequate Metrology, Accreditation, Standards and Quality (MAS-Q) infrastructure. They lack funding, technical expertise and knowledge of international accepted practices and the functioning and maintenance of adequate metrology and laboratory testing facilities. The level of sophistication and awareness with respect to standards development and conformity assessment is low in most developing countries and it may take several years and considerable investment to improve this situation. On an international level, while many developing countries are members of the International Organization for Standardization (ISO) and the International Electrical Commission, (IEC) they do not participate actively in their working committees nor in the international Mutual Recognition Agreements or Memorandums of Understanding that relate to conformity assessment activities.

Today it is virtually impossible to underestimate the importance of metrology, accreditation, standards and quality in the development of economic policies. Differences in standards and certification requirements from one country to another can be used as “Technical Barriers to Trade” The importance of conformity assessment in both domestic and international trade was prominently noted in the 1994 Agreement on Technical Barriers to Trade (TBT Agreement) of the international General Agreement on Tariffs and Trade of the WTO.

While there is a major push and interest by many developing countries to achieve membership in the WTO, most governments are not prepared nor do they understand what is required to meet the obligations of the TBT agreement. These countries have laws, decrees and regulations governing standardization, certification and accreditation, most of which are TBT's in themselves. Creating a MAS-Q infrastructure in developing countries is essential for improving productivity, market competitiveness, export capability and meeting the policy of the World Trade Organization.

**Common symptoms in developing economies:**

- Standards are mandatory
- Some developing countries have more standards than ISO
- Standards are developed by government agencies with little or no industry participation
- National certification and standards bodies are regulatory and enforcement agencies.
- Fines and penalties are imposed and collected from private sector organizations for non-compliance to national certification and accreditation procedures.
- There is misunderstanding, misuse and misrepresentation of ISO certification and accreditation.
- Lack of trained technical staff when it comes to ISO certification and accreditation
- Lack of modern metrology, scientific apparatus and facilities
- Lack of funding,
- Lack of participation in international activities concerning MAS-Q
- Most important, they need assistance in how to develop and implement a MAS-Q infrastructure that will meet domestic requirements and be internationally recognized.

**Example:**

As part of a recent USAID funded project in Central Asia, a review assessment of the metrology, accreditation, standardization and certification systems in Kazakhstan and Kyrgyzstan was conducted.

The assessment concluded that the present system contains many processes, procedures, ideology and equipment left over from Soviet times. The enforcement of outdated standards and certification requirements negatively impacts the output of an SME production, it limits the ability of local suppliers to provide products and services to the growing oil industry in Kazakhstan, and increases start-up costs for new businesses

The system does contain many acceptable practices, but falls short in many areas and does not comply with international norms.

The problem that they face is lack of funding, lack of trained technical staff, lack of modern metrology, scientific apparatus and facilities and most important, they need assistance in how to develop and implement an infrastructure that will meet domestic requirements and be internationally recognized and accepted.

The Government of Kazakhstan has also recognized the shortcomings of the present system and expressed their desire to adopt and implement a national quality program based on the ISO 9000 series of Quality Management System standards. They conceived a formal 5 year program for improving the quality of domestic goods and services. USAID working with the appropriate Kazakh government organization is supporting this program, A joint plan of action has been developed and implemented

A similar situation exist in Kyrgyzstan, Kyrgyzstandart is currently viewed by SMEs as one of the more intrusive government bodies and one that significantly raises the cost of doing business, discourages compliance, and ultimately, discourages legitimate trade, product innovation and economic growth. Its standards are still primarily soviet-era GOST standards, and its protection measures utopian, which results in little real protection but increases opportunities for abuse.

**The issue of standards and conformity assessment and the impact that their adoption and use may have on economic development** and trade flows has not been a major concern of policy makers in developing countries until recently. This is due to the fact that more traditional forms of market imperfections and trade barriers have played a predominant role in these economies. Industrial policy has been concentrated on the provision of differential taxes and subsidies to chosen sectors of industry rather than focusing on the impact of harmonizing and/or making compatible differing product standards. Relatively little attention has been given, until very recently, to the establishment of credible and modern infrastructure for laboratory testing and calibration facilities, or to the development of certification methods and accreditation bodies or the provision of systems of quality management control.

**There appears to be a growing awareness of the potential deterrence to trade posed by differing national standards and technical regulations**, along with an equal lack of knowledge and awareness as to the impact which the choice of standards may have on trade and economic development. In terms of standards development, the first priority of developing countries should be the adoption of international standards, as they exist, along with the international standardizing Guides of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). Both would facilitate the integration of their manufactured exports into world markets and would reduce the costs of the required conformity assessment procedures. As to the bulk of standards which have not been internationally harmonized, since developing countries are on the whole “standards takers” rather than “standards makers” their best choice, both from a cost and an efficiency point of view, is the adoption of those standards used in the markets of their major trading partners rather than the elaboration of their own indigenous standards.

It would be desirable for developing countries to act more forcefully in the area of standards and conformity assessment in a number of areas. Firstly, in the area of adoption of standards, a more active and concerted participation in the committee work of the international standardizing bodies would ensure that new international standards which are adopted would more closely reflect developing-country needs and would reduce the predominantly European influence found at present in the new standards which are agreed. For the adoption of national standards in the case where no international standard exists, there is little economic rationale for developing countries to invest in the elaboration of their own standards in the case of traded products. These standards should consequently in most cases be taken from their major trading partners, in order to better promote trade flows and international technology transfer. A more active participation of private sector firms in the standardizing process for all non-mandatory or voluntary standards would likely ensure that this happens *de facto*.

With respect to existing multilateral disciplines for standards and conformity assessment, developing countries should strive for a more effective implementation of the disciplines and obligations contained in the WTO Agreement on Technical Barriers to Trade, particularly with respect to notification of national practices. This would be of benefit to their own economies as well as to those of others, as the enhanced transparency should assist domestic producers and exporters in commercializing their products in foreign markets. Moreover, complying with the requirement to establish a national enquiry point would oblige government officials in developing countries to put into practice a system of national standards information which should benefit local producers and exporters as much as foreign ones. Collection and

systematization of this information by a national standards information center would also oblige governments to be more aware of the choices that they are making and imposing on their private sector with respect to standards development.

### **Ability to compete in global markets is directly linked to MAS-Q**

One impact of the global market today is that the manufacturers' as well as consumers have a lot of choices. The consumer can purchase goods and services from any part of the world. Producers can have manufacture facilities in almost any country.

Standards and national systems for testing, certification, and laboratory accreditation are increasingly becoming an important part of modern industrial development and global trade. National Measurement Systems, driven by private market forces, can assist in increasing industrial productivity, and product quality for international markets. Increasingly, the ability to compete in global markets is directly linked to standards, which are the international language to access markets.

In addition to the documentary standards themselves, the procedures through which products are evaluated for conformity to regulatory requirements have important implications for market efficiency and trade expansion. Product testing, certification, laboratory accreditation, and labeling procedures impact product cost and quality. Government mandated conformity assessment requirements also represent opportunities for trade protection.

### **In summary:**

1. Standards, technical regulations and conformity assessment procedures have become increasingly important as non-tariff barriers to trade as the more traditional, border barriers have been brought down. However, relatively little is known about the extent and nature of these barriers and even less about their quantitative impact, particularly in developing countries.
2. Developing countries have not been heavily involved in the development of international and regional standards to present and have thus been on the sidelines of efforts to rationalize this process. In order to have more of an influence on the standards which are adopted, developing countries should take a more pro-active approach in the ISO/IEC and other relevant multilateral and regional bodies.
3. Developing countries should avoid developing their own national standards to the extent possible, for reasons of both efficiency and cost. In order to facilitate entry into their export markets, they should adopt those standards of their major trading partners.
4. For the promotion of trade facilitation in the area of standards and conformity assessment, regional initiatives appear to be a more promising approach than the multilateral trading system due to the elements of increased trust and commonality of interest which are present at the regional level. This is especially true with respect to the elaboration of mutual recognition agreements.