

Enhancing Trade Facilitation and Market Access through International MAS-Q Recognition

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Abstract

Trade is the crucial driver for economic growth in developing countries. In seeking to expand international trade, it is virtually impossible to underestimate the importance of adopting and implementing international practices in the area of metrology, accreditation, standardization and certification (MAS-Q). These activities provide a vital link to global trade, market access and export competitiveness. In view of the ever increasing globalization of trade and investment and the widespread adoption of the World Trade Organization (WTO) and other regional trade agreements such as in the European Union, rules on non-tariff trade barriers, adopting and implementing these approaches has become a central political task for many countries as well as an enormous challenge.

Introduction

One of the main challenges facing the international trading system is diverse conformity assessment practices, the use of standards and approaches that persist in different countries. Conformity Assessment has become an important component of world trade. Unless trading partners adhere to similar or equivalent conformity assessment procedures and requirements, and recognize each other's conformity assessment results, then the costly problem of discriminatory, non-transparent and unnecessary obstacles to trade will persist.

Conformity assessment is the internationally recognized procedure for demonstrating that specified requirements relating to a product, process, system, person or body are fulfilled, thus determining compliance. Conformity assessment activities include: testing, inspection, certification and accreditation. Developing countries and countries making the transition from a centralized to a market economy make up some three quarters of the International Organization for Standardizations (ISO) membership and similar numbers for the WTO. For these members and countries wishing to accede to the WTO and or the European Union, standards and conformity assessment are an important source of technological know-how for developing their economy and raising their capability to export and compete in global markets.

Mutual recognition of accreditation and certification activities facilitate access to international markets; provide the technical underpinning to international trade by promoting cross-border stakeholder confidence and acceptance of accredited test data and certified results. This is made possible through a network of mutual recognition arrangements (MRAs) among international accreditation bodies.

WTO obligations - The TBT Agreement

The importance of standards and conformity assessment in both domestic and international trade was prominently noted in the 1994 Agreement on Technical Barriers to Trade (TBT Agreement) of what is now the WTO. The TBT Agreement recognizes that conformity assessment activities

can expedite or seriously hinder the free flow of goods in international commerce and establishes procedural requirements for conformity assessment schemes to avoid the establishment of unnecessary obstacles to trade. The agreement requires that conformity assessment procedures be "prepared, adopted and applied so as to grant access for suppliers of like products originating in the territories of other Members [signatories to the agreement] under conditions no less favorable than those accorded to suppliers of like products of national origin or originating in any other country. The Agreement also requires that such procedures not be "prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade." Ideally, a properly conducted conformity assessment program benefits, not hinders the free flow of goods into the marketplace.

In expanding trade, in particular, standards and technical regulations are essential for market access. Standards (voluntary) and technical regulations (mandatory) define what goods and services can and cannot be exchanged, and outline procedures under which such exchanges are and are not permissible. The TBT Agreement distinguishes between standards and technical regulations.

The TBT Agreement defines a **technical regulation** as a:

*"Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with **which compliance is mandatory**. It may also include or deal exclusively with terminology, symbols, packaging, marking or labeling requirements as they apply to a product, process or production method."*

In contrast, the agreement defines a **standard** as a:

*"Document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with **which compliance is not mandatory**. It may also include or deal exclusively with terminology, symbols, packaging, marking or labeling requirements as they apply to a product, process or production method."*

As the major world trade facilitation body, the WTO emphasizes through its various agreements the importance of ensuring that countries' regulations do not create unnecessary barriers to international trade. Despite its emphasis on ensuring that no unnecessary barrier to trade be created through technical regulations, the TBT Agreement recognizes that countries have the right to establish protection for human, animal, or plant life, or the protection of health and the environment. The substantive provisions under the agreement can be grouped into four sometimes interrelated areas. These groups of obligations are summarized below:

- Granting treatment to imports that is not less favorable than that granted to local production (national treatment)
- Encouragement of members to rely on harmonized standards (reliance on international standards)
- Transparency in the development, application, and implementation of standards and technical regulations; and
- Procedural requirements related to notification to the WTO of TBT-related matters

The Code of Good Practice (Annex 3) to the TBT Agreement extends these principles to standards.

Technical regulations, product standards and conformity assessment procedures vary from country to country, having different standards and regulations makes life difficult for producers and exporters. If regulations are set arbitrarily, they could be used as an excuse for protectionism. The TBT Agreement tries to ensure that regulations, standards, conformity assessment procedures do not create unnecessary obstacles to trade

Accreditation (a conformity assessment activity) is the internationally accepted system that recognizes the competence of testing and calibration laboratories, product certification bodies, quality system certification bodies and inspection bodies. Accreditation establishes assurance of the quality of test data and provides discipline and a sense of professionalism that is internationally accepted. This minimizes duplication of re-testing and re-certification, reduces cost and eliminates non-tariff barriers to trade and market access delays.

Mutual recognition of accreditation and certification systems facilitates access to international markets; provides the technical underpinning to international trade by promoting cross-border stakeholder confidence and acceptance of accredited test data and certified results. The present international concept is “Certified Once, Accepted Everywhere”. This is made possible through a network of mutual recognition arrangements or agreements (MRAs) among international accreditation bodies.

Accreditation is a valuable and neutral tool that facilitates trade by enabling organizations to independently demonstrate their competence in an internationally acceptable manner. The respective International Laboratory Accreditation Cooperation (ILAC) and International Accreditation Forum (IAF) Arrangements together with the International Organization for Standardization (ISO) promote the use and acceptance of international standards and conformity assessment activities as part of national trade policies.

All countries need an adequate MAS-Q infrastructure

In order to realize the benefits that will be gained from being a member of the WTO, compliance to the WTO – TBT Agreement and the agreement on the Application of Sanitary and Phytosanitary Measures, (SPS), is a must. Countries must have an adequate MAS-Q infrastructure in place. In many developing countries and transitional economies such as those of the former Soviet Union, the national metrology and standards institutes were and in many cases still are providers of all MAS-Q functions. This restricts private sector competition and the system (infrastructure) is in conflict with international principles of conformity assessment, thus eliminating their chances to achieve mutual recognition of conformity assessment activities. The emphasis was and in many cases still is on control and supervision. These government organizations are regulatory and enforcement bodies. This situation creates a series of conflicts of interest as and creates unnecessary barriers to trade.

A successful national MAS-Q program requires that nations develop technical norms and practices that insure confidently and competently that products, processes and services are developed and implemented according to the best international practices available.

Presently there are 149 members of the WTO and some 32 countries/separate Customs territories that have formally stated their intention to accede, in doing so; they have committed to complying with the TBT and SPS Agreements. In addition they have to accept the “Code of Good Practice” which establishes rules for the Preparation, Adoption and Application of Standards. Compliance to these agreements is mandatory

A Successful Model: The USAID/Pragma MAS-Q Program in Central Asia

Background

Central Asian countries, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan are former Republics of the Soviet Union. These countries represent 0.181% (2005 GDP – World Bank information) of the world's total trade, Kazakhstan being <0.12% with Kyrgyzstan, Uzbekistan, Turkmenistan and Tajikistan accounting for 0.06%. Excluding the oil industry, Central Asian economies are small and provide limited markets for local trade. As a result, better access to foreign markets is crucial for Central Asian economic development.

The Governments of Kazakhstan, Tajikistan and Uzbekistan have officially stated their intention to accede to the World Trade Organization (WTO) and, in doing so, including Kyrgyzstan which is presently a WTO member have committed to comply with the WTO's, TBT and SPS agreements. These governments on paper readily accept the conditions set forth by these agreements, but in practice and implementation, compliance falls short.

The Central Asian Program

The MAS-Q program in Central Asia commenced in 2002 as the result of a formal request for assistance from the Government of Kazakhstan to the US Government. An international MAS-Q expert working with technical specialist and management of Gosstandard produced a basic work plan that identified those areas where technical assistance was needed and could be supplied to bring the MAS-Q system in Kazakhstan in line with international requirements. The program quickly spread neighboring countries and became regional in scope and included Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan. Afghanistan also applied for membership to participate in regional MAS-Q activities.

Within Central Asia, the National Metrology and Standards Institutes (Gosstandards) are in general "regulatory and enforcement" agencies. Most of the existing government laboratories and certification bodies utilize mandatory standards, processes, procedures, equipment and ideology left over from Soviet times, most of which are outdated and lack international acceptance, recognition and compliance. There was a general lack of modern metrology instrumentation, scientific apparatus and facilities and more importantly, there was a lack of technical knowledge and experience in the application of a modern internationally compliant system of measurement. Many MAS-Q related laws, regulations and procedures were outdated and in conflict with international norms, these had to be revised, or withdrawn. Even some new legislation showed sign of reluctance to introduce change.

Although each country had a few of its own unique issues, there was a great deal of similar regulatory acts, procedures, standards, equipment, technology and structure. This was no surprise, since all of the Gosstandards had the same teacher – Russia!

An Overview of Challenges and Capacity Constraints in Central Asia

New legislation, new technical skills and reform of the existing MAS-Q infrastructures were required to bring present systems into compliance and achieve international recognition and acceptance. Achievement of this would enhance foreign investment and increase local businesses' ability to compete in the global marketplace.

There were a number of items that needed attention:

Language: The fact that most international MAS-Q guides, procedures, documents, standards, regulations, etc are predominantly available in English hampers their use in the region. There was a lack of English language skills of the technical specialist of the Gosstandards.

Technical Capacity and Expertise: In the region, there is a general lack of modern metrology instruments, scientific apparatus and facilities and most important a lack of present day technical knowledge, experience and participation in international MAS-Q activities. Most of the existing metrology and test laboratories relied on processes, procedures, ideology and equipment left over from Soviet times, most of which are outdated and lacked measurement traceability to the SI.

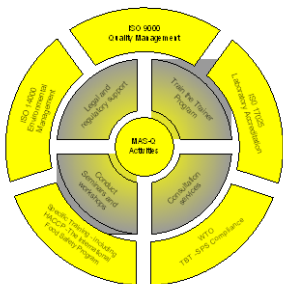
International compliance of accreditation and certification procedures: Although there are hundreds of laboratories accredited in Central Asia, according to individual national systems, there are less than 5 that had been accredited to the international standard (ISO/IEC 17025) 100%. Certification to Quality Management Systems was similar. None of the Central Asian accreditation bodies are signatures to either the ILAC or IAF MRA's

Financial Capacity There is a general lack of government funding to support the necessary activities of the Gosstandards of the region (Kazakhstan was the exception). The primary source for funding of government controlled MAS-Q agencies were fees and fines imposed by the Gosstandards on the private sector.

Legal and Regulatory Constraints: Laws, regulations and procedures throughout Central Asia pertaining to standardization, certification, accreditation and unity of measurement are in most cases, mandatory. In general; international standards, 3rd party (from outside of CIS) certification and accreditation programs are not recognized fully or accepted without redundant, certification and testing by the Gosstandards. The strengthening of the legal framework and harmonization of national certification, standards, regulations, laws and policies needed to be consistent with international norms, including making the transition from mandatory conformity assessment requirements to a voluntary system.

The MAS-Q program

The USAID funded program implemented by the Pragma Corporation was headquartered in Almaty, Kazakhstan. A team of international and local experts were selected. This included a



Director, (an international recognized MAS-Q consultant), a Deputy Director (Physicist and Lawyer, PhD) specializing in Technical Regulations and the TBT/SPS agreements, a Director of the Quality Management Center and two national MAS-Q specialists located in Kyrgyzstan and Tajikistan. International short-term technical experts as needed are brought in to support the team.

The MAS-Q team worked closely with the Gosstandards in the 4 countries together with international short term technical (volunteers and paid short term consultants) experts to perform detailed individual evaluations. Teams of technical experts spent months on site performing evaluations, making recommendations for restructure to achieving international acceptance, etc. The MAS-Q project entered into individual Memorandums of Understanding (MOU) with each of the Gosstandards in the region. The MOU's detailed the goals, areas of assistance and responsibilities of the parties.

International support

The program received technical assistance and support from some of the world's leading MAS-Q experts and organizations. Assistance included conducting seminars, training and workshops, and providing material and equipment. The following organizations (many on voluntary basics) provided technical experts that traveled and worked in Central Asia.

- *The International Organization for Standardization -ISO - Switzerland*
- *The International Laboratory Accreditation Cooperation –ILAC-Australia*
- *NCSL International – NCSLI- USA*
- *The United States National Institute of Standards and Technology-NIST*
- *The Sistema Interamericano De Metrologia –SIM*
- *The Instituto Ecuatoriano de Normalizacion – INEM- Ecuador*
- *National Institute for Metrology, Standardization and Industrial Quality - INMETRO- Brazil*
- *The American National Standards Institute -ANSI -USA*
- *The US Department of Defense –US Air Force- USA*

Specific elements of the program

The MAS-Q program focused on a set of parallel paths - Technical and Legal and Regulatory

It was obvious to the MAS-Q team that we had to bring together members of the regulatory, legal and technical organizations in each of the countries to facilitate a unified program for developing and implementing legislation that would be internationally compliant and not be considered a barrier to trade. The focus was on:

Technical

General – Develop and implement a unified national MAS-Q infrastructure that strengthens and aligns the technological base of the national metrology, standards and conformity assessment organizations to a level that will be accepted by the international MAS-Q community.

Specific

- Train technical specialists to become recognized auditors and assessors
- Upgrade metrology capabilities, perform inter-laboratory comparisons of artifact standards and establish traceability of measurement to the SI system of units
- Train technical specialists in the usage of the international vocabulary of MAS-Q.
- Transition the Gosstandards infrastructure to be compliant with international norms
- Have the Gosstandards actively participate in international MAS-Q organizations

Legal and Regulatory

General - Strengthen the legal framework and harmonization process of national quality laws, standards, regulations and policies to be consistent with international norms.

Specific

- Develop and implement Laws on technical regulations that are WTO compliant
- Revise system on standards, accreditation and certification from mandatory to voluntary
- Adopt and implement the TBT, Code of Good Practice

- Harmonize documentary standards

Accomplishments

In the area of Quality Management



In Kazakhstan, we created a Quality Management Center (QMC) The QMC provides training and consultancy services to SME's to prepare them for certification in accordance with ISO 9001 Quality Managements Standard. To implement and develop the program, a quality professional with over 20 years of experience in the US automotive industry was appointed Director of the Center. His mission, build a Quality Management program in Kazakhstan that meet the needs of local industry, develop an awareness program for what ISO 9001 certification was and was not. There was a perception in Kazakhstan that ISO 9001 guaranteed product quality and product certification. Neither of these is true. Today, the QMC is working with more than 50 SME's. Presently 31 clients of the QMC have achieved ISO 9001:2000 certification by internationally accredited certification bodies. The QMC itself has also achieved ISO 9001:2000 certification. The certification was performed by an internationally accredited American certification body. One of the objectives of the QMC was to make it self supporting, become sustainable. Services have been expanded to include, ISO 14000, 18000, 22000 and 17025. The QMC became a None Government Organization (NGO) in Kazakhstan, it is now financially self supporting and in process of becoming fully privatized, at which point it will be owned and managed by the present employees of the QMC. The ideal USAID success story – “subsidized, sustainable, privatized”

In the area of Metrology



The US Navy and the Boeing Corporation have been providing a donation of metrology and scientific test instrumentation valued in excess of \$1million for the members of the regional cooperation. Equipment was provided to the National Metrology Laboratories of Kazakhstan, Kyrgyzstan and Tajikistan. Specific equipment was calibrated by the Navy and Boeing and provided with "certificates of calibration" stating international traceability of measurement to the US National Institute of Standards and Technology. This was the first time traceability to the international system (SI) via US standards was established in Central Asia. In most cases; this equipment was at a level of higher performance, capability and accuracy than was being used by the Gosstandard laboratories. As part of this program, two metrology training courses were conducted. Technical specialist from the national metrology institutes of Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan participated in the four week program that included metrology theory and hands on application of the instrumentation that was provided.

In the area of Regional Cooperation



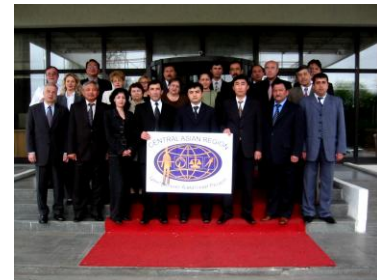
In July 2003, the Central Asian Cooperation on Metrology, Accreditation, Standardization and Quality (CAC-MAS-Q) was formally established with the assistance of international experts and facilitated by the MAS-Q team. This organization was established at the request of the Gosstandards in the region to address MAS-Q issues that impacted Central Asia. Members of the cooperation are

the four National metrology and standards institutes in the region. As part of the CAC activities, a series of MAS-Q technical committees were formed. The main goal of the CAC is to promote harmonization of standards, acceptance of certification and accreditation procedures within the region and to become signatures of the ILAC and IAF Mutual Recognition Arrangements. The MAS-Q Director was appointed Senior Technical Advisor; the MAS-Q Deputy Director became the Executive Secretary and maintained the Office of the Secretariat. One of the primary goals of the CAC-MAS-Q was to align the National Metrology and Standards Institutes in the region to a level that will be internationally recognized, accepted and compliant with the World Trade Organizations Technical Barriers to Trade and Sanitary and Phytosanitary Agreements and other international norms. It should be noted, as this organization began to function, its reputation became a model for developing countries, The Gosstandard of Afghanistan requested participation in the organization. This was unanimously approved by the executive committee of the CAC-MAS-Q.

Through the CAC-MAS-Q, the first steps toward mutual recognition was achieved



NCSL International established a regional section in Central Asia. At the request of the CAC-MAS-Q, NCSL has established a new regional section in Central Asia. The CAC-MAS-Q is the region liaison.



The Head of the Metrology department of NISM –Kyrgyzstan, has been appointed as the regional coordinator to NCSL. This association will further enhance visibility of MAS-Q activities in Central Asia and another step toward achieving mutual recognition. The newly formed Central Asian region of NCSLI held its first meeting in Bishkek, Kyrgyzstan. The meeting was hosted by the National Institute on Standards and Metrology of Kyrgyzstan. Twenty three attendees from Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan participated in the two day meeting and workshop.



The International Accreditation Forum granted special membership to the CAC-MAS-Q.

The International Accreditation Forum, Inc. (IAF) is the world association of accreditation bodies and other bodies interested in conformity assessment. Its primary function is to develop a single worldwide program of conformity assessment which reduces risk for business and its customers by assuring them that accredited certificates may be relied upon. Accreditation assures users of the competence and impartiality of the body accredited. The IAF motto is “Certified Once, Accepted Everywhere” The CAC-MAS-Q has officially been granted special membership status in IAF. This is a major step toward achieving international mutual recognition for Central Asian accreditation and certification systems. Members of the CAC have been participating actively in the work of IAF and attend IAF Annual General Assembly and working group meetings. In particular the CAC-MAS-Q representatives have attended the meetings of the IAF Technical Committee and the Development Support Committee aimed at assisting developing country accreditation bodies and to be observers at the MLA Committee meeting.



The International Laboratory Accreditation Cooperation (ILAC) granted the CAC-MAS-Q the status of “Regional Accreditation Cooperation Body”

The International Laboratory Accreditation Cooperation is the world's principal international forum for the development of laboratory accreditation practices and procedures, the promotion of laboratory accreditation as a trade facilitation tool, the assistance of

developing accreditation systems, and the recognition of competent calibration and test facilities around the globe. The CAC also received permission to translate ILAC from English to Russian.

A “Road Map Plan to become signatures to the ILAC and IAF mutual recognition arrangements has been developed and adopted by the members of the CAC-MAS-Q as a plan to achieve recognition on a region basis.

Note: Central Asian countries are the first and only countries in all of CIS to achieve the status of being recognized by these three organizations.

In the area of Accreditation

Technical specialist were trained to become assessors to perform accreditation of testing and calibration laboratories in full accordance with ISO/IEC 17025. The training materials used were developed and provided by the US National Institute of Standards and Technology, (NIST). The course lead instructor was a lead assessor and trainer for the US National Voluntary Accreditation Program. The training course followed the guidelines for training assessors for laboratory accreditation, developed by the International Laboratory Accreditation Cooperation (ILAC). There are now 72-trained technical specialists in Central Asia that under the supervision of an internationally recognized lead assessor are eligible to participate in the accreditation of test and calibration laboratories in full compliance with the International Standard 17025.



Additional MAS-Q supported activities

- Funding for membership in the International Laboratory Accreditation Cooperation for the national accreditation bodies was provided
- The National accreditation bodies were introduced and instructed on a program of accreditation infrastructure development based on the new ISO /IEC Standard, 17011, which establishes the general requirements for accreditation bodies
- The overall program promoted the adoption, harmonization and use of international documentary standards including ISO, IEC, and CODEX. To date in Kyrgyzstan, over 6000 mandatory standards have been made either voluntary or obsolete; NISM has officially adopted the “Code of Good Practice”.
- Translations into Russian of more than 30 important guides, procedures and other technical documents of ILAC, IAF and EA (European Accreditation) were completed and agreed by members of the CAC-MAS-Q.
- Technical English language training was provided in the four countries to improve the ability of selected Gosstandard personnel to read, interpret and use technical terminology in order to communicate and participate more fully and effectively in international metrology, standards and conformity assessment activities.

The Nation Institute on Standards and Metrology established in Kyrgyzstan

February 2004, the President of the Kyrgyz Republic, issued a Degree formally converting the State Inspectorate on Metrology and Standardization (Kyrgyzstandard) under the Government of the Kyrgyz Republic into the National Institute on Standards and Metrology (NISM) of the Kyrgyz Republic. The new organization has the status of a nonprofit government institution and assigned the functions on standardization, metrology and accreditation. Certification activities were transferred to another organization.



The establishment of NISM was part of a three (3) year transition plan, for the restructure of Kyrgyzstandard, NISM became a government organization without Executive Authority and had no regulatory or enforcement functions; it could no longer impose or collect fines or penalties.

New Legislation approved in Kyrgyzstan

May 22, 2004, the President of the Republic signed the law “On The Fundamentals of Technical Regulations in The Kyrgyz Republic” This new law, the first of its type in Central Asia establishes the legal fundamentals for the development, adoption, application and performance of mandatory requirements for products that are produced or imported into the Republic. It also establishes and introduces into the Republic the principles of voluntary standardization and conformity assessment activities. The effect of this law should be beneficial to local producers and importers; there should be a substantial reduction of the number of products that required mandatory certification.

This law basically follows the requirements of the World Trade Organizations (WTO) Agreement on Technical Barriers to Trade (TBT) and the Agreement on The Application of Sanitary and –Phytosanitary Measures (SPS). For Kyrgyzstan this law establishes the vital link between trade, standards and export competitiveness while strengthening the legal frame work and harmonization process that is consistent with international norms.

The overall result of the above two legislative acts will have a positive impact on trade and foreign investment. This will reduce cost to manufactures, producers and importers by elimination of many mandatory and redundant certifications and inspections.

The future of the MAS-Q program in Central Asia

The MAS-Q program achieved many successes, as those described within this paper. The project will come to an end in May of 2006. Over the years the MAS-Q team established a line of communication with other donor organizations that have active MAS-Q programs in Central Asia. This includes the World Bank, the European Union TACIS program and the WTO’s International Trade Centre. A joint CAC-MAS-Q meeting was held in Kyrgyzstan in October 2005, representatives of above mentioned donor organizations actively participated with the members of the CAC. The objective of the meeting was to promote the benefits, work in process and projected activities of the CAC-MAS-Q to the donor organizations in hope that they would replace the USAID effort in providing technical and financial support to the organization. All of the donor organizations agreed that the CAC-MAS-Q had achieved great things and there certainly was a value in them providing continuing support. Each donor organization agreed to review their programs and see what level of effort they would be able to provide. The CAC’s Secretariat’s functions which were provided by USAID have been transferred to National Institute on Standardization and Metrology in Kyrgyzstan, the Director of NISM has assumed the chair of the CAC and has appointed person responsible for Secretariat office.

Conclusion: The MAS-Q program has been a great success and unique to a USAID portfolio. A proven model to enhance trade affiliation and global competitiveness has been developed and successfully implemented. It is with great hope that similar programs based on what was learned and achieved in Central Asia will set a standard for use in developing and transitional economies.