

# AID-FOR-TRADE: CASE STORY

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## HOW LABORATORY BUSINESS AND EXPORTS CAN GROW HAND IN HAND EASING TRADE THROUGH TRUSTED LOCAL CONFORMITY ASSESSMENT

Date of submission: 31 January 2011

Region: Asia

Country: Sri Lanka and Pakistan

Type: Project/process

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#### Executive Summary

UNIDO's Technical Assistance (TA) has proven that supporting testing laboratories towards international accreditation is beneficial to both laboratories and the private sector. Laboratories benefit from obtaining international recognition for the accuracy of their services whereas companies that intend to export profit from locally available, internationally accepted testing services with reduced testing time and lower costs. Examples from Sri Lanka and Pakistan show that the accreditation of laboratories leads to an increase of testing services and subsequently to increased revenue of the laboratories. At the same time, local accredited laboratory services broaden the access to recognized testing services for an increasing number of potential exporters in a country.

UNIDO, with financial assistance from the Norwegian Agency for Development Cooperation (NORAD), upgraded 7 laboratories in Sri Lanka to meet conformity assessment criteria and attain ISO/IEC 17025:2005 accreditation. The availability of local conformity assessment services eased the proof of international market compliance of exported products whilst simultaneously generating business for the laboratories. Similarly the European Union (EU) provided assistance within a Trade Related Technical Assistance (TRTA) program to upgrade 18 laboratories in Pakistan to pursue similar objectives as in Sri Lanka. The upgraded laboratories were in the areas of chemical and microbiological testing, calibration and sector specific textile/apparel, rubber, leather and electrical testing.

The internationally recognized local testing and calibration capacity was a boon to exporting companies that were disadvantaged by the non-availability of such facilities thus far and were either not a partner in the international trading process or were incurring high costs for the required testing which they had to source from foreign countries. Within this scenario the upgraded laboratories were able to generate enhanced business and to attract a high number of new clients. The chemical, microbiological and calibration laboratories took the lead – increasing their income almost 3 fold.

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#### 1. Issues Addressed

Integration into the world economy has proven a powerful means for countries to promote economic growth, development, and poverty reduction. However, most developing countries have not been able to reap the benefits of globalization and trade liberalization due to lack of competitiveness of their export products in world markets. On one hand, this requires developing the supply side, enabling enterprises to manufacture products with high-export potential in the quantities and at the level of quality required by the markets. On the other hand, it requires evidence of market conformity, enabling these same enterprises to ensure

that their products conform to the relevant international standards, in particular private buyer and technical requirements where increasingly stringent regulations apply with regard to product quality, safety, health and environmental impacts.

One of the key hurdles to cross-border trade that is faced by exporters is costly multiple testing and certification of products through services provided in foreign countries leading to a de-facto trade obstacle. Producers in developing countries face several impediments if internationally accepted testing laboratories are not available within their own country as such enterprises have to have their products re-tested and re-verified for each country in which they plan to export. This is invariably a costly and time-consuming process.

Accreditation has long been used as a tool to facilitate the free circulation of goods and services and provide the market the confidence in the tested and certified products and services while at the same time providing a level playing field for all conformity assessment bodies that choose the route of accreditation. UNIDO's Trade Capacity Building (TCB) approach emerged at a critical juncture when several markets started putting their confidence in accreditation as the preferred route for the assessment of conformity assessment bodies. Thus, UNIDO's accreditation centered technical assistance approach gave a unique opportunity to developing countries to develop their local laboratory infrastructure to reach international good practice and recognition.

## **2. Design and Implementation**

Two projects particularly showcase the benefits of this approach: In Sri Lanka, with financial contribution from the Government of Norway through NORAD, "The UNIDO Integrated Industrial Support Program" was formally launched in September 1999. The project was implemented in 2 phases with a total financial commitment of approximately Euro 6.8Mn covering the period 1999 to 2008. Key areas for upgrading were identified in consultation with the Government of Sri Lanka (GOSL). The program provided support for the development of the country's national quality infrastructure with specific testing needs for the garments, tea, rubber and fisheries sectors (upgrading of 7 public laboratories). The design and implementation of the project in Sri Lanka was subsequent to a capacity needs assessment of the laboratories in relation to the needs of the existing and projected customers of the export sector. Commercial and industrial organizations were involved to collect the number; type and range of chemical and microbiological testing that were contracted to local and overseas laboratories.

In Pakistan, the specific needs for competent testing and calibration were first established through a careful assessment of the existing services the laboratories were providing for products destined for export and the constraints faced by exporters in relation to proof of conformity and market connectivity issues. Testing needs associated with sectors such as textiles, leather, agro-based processing and fisheries were mapped against locally available testing services. Subsequently a Trade Related Technical Assistance (TRTA) program was developed with and financed by the EU to the tune of Euro 2.5Mn covering the period 2004 to 2007, and implemented by UNIDO. This component provided technical assistance towards upgrading of the national institutional infrastructure for standardization, product testing, metrology/calibration, enterprise systems' certification and accreditation and traceability schemes (upgrading of 18 product testing laboratories). At the same time, it supported the development of the fisheries sector in hygiene and quality management and for the inspection of fisheries exports as required by international markets.

The development of the national quality infrastructure, product testing and metrology laboratories in both Pakistan and Sri Lanka was supported through expert inputs,

training/study tours, purchase of equipment/chemicals/reference materials, facility upgrading and proficiency testing for upgrading the laboratories to meet the ISO/IEC 17025<sup>1</sup> accreditation status. The projects also provided accreditation and assessment fees with a clear exit strategy after a support period of 3 to 5 years.

Both projects also supported the private sector where supply capacity constraints were addressed to facilitate exports. Issues such as 'Market access in a globalized economy', 'Testing requirements for the export industry', Importance of internationally recognized testing facilities' etc. were addressed with the beneficiaries to highlight advantages of using locally available services provided by accredited laboratories and to contribute to the integration of local enterprises into the global trading system.

### 3. Key Findings

In both countries the largest volumes of laboratory services for upgrading and the largest number of new customers requesting services was in the areas of chemical and microbiological testing. Services were provided to a large gamut of export sectors such as the garments, fisheries, tea, food and beverages, rubber and footwear where services were provided for monitoring of water, waste water, product quality etc. In Sri Lanka there was a 72% increase in the customer base from 2002 before accreditation to 2008 after accreditation with about 325 new customers being able to satisfy the requirements of global buyers with services from the accredited laboratories and to enhance their export capacities. Simultaneously, the income generated by these laboratories increased by 179% during the same period amply demonstrating that it was a 'win-win' situation for both the accredited laboratories and the private sector exporting companies. A similar situation was witnessed in Pakistan where the income generated by the chemical and microbiology laboratories and the number of services provided to exporting companies increased by 185% from 2002 (prior to accreditation) to 2008 (after accreditation). In both countries the strategy of careful testing needs assessment followed by support provided to testing laboratories and the private sector was thus proven right.

In addition, the quantity of fishery exports from Sri Lanka to the EU increased from 13,532MT in 2002 to 20,594MT in 2008 and fish exports rose from 7,724MT in 2002 to 15,014MT in 2008. Similarly in Pakistan, the accredited chemical and microbiological laboratories played a major role of analysis of fishery products for export. Fishery exports recorded an upward trend from 84,693MT in 2002 to 135,000MT in 2008. Even though this increase in exports cannot be attributed to the laboratory development intervention alone as the fishery industry has received and continues to receive assistance from many donor agencies, the accredited laboratories made a noteworthy contribution to the increase in exports.

Another win-win situation was experienced by the international accreditation of calibration laboratories in Sri Lanka. International recognition of the accuracy of calibration services is essential to allow for calibration of laboratory equipment used in local testing laboratories. Such accredited calibration services are required for the accreditation of testing laboratory services. If not locally available, accredited calibration services need to be sourced from abroad. Sri Lanka recorded a significant increase in the number of customers from 174 in 2002 to 344 in 2008 and a 165% increase in generated income. In the absence of a functioning National Metrology Institute in the country, the internationally recognized

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<sup>1</sup> ISO/IEC 17025:2005 specifies the general requirements for the competence to carry out tests and/or calibrations, including sampling. All types of laboratories covering chemical testing, biological testing, physical & mechanical testing and calibration laboratories are included under this scheme.

accreditation of the calibration laboratory was highly beneficial to exporters, other testing laboratories and organizations with ISO 9000 and ISO 14000 certification.

The laboratory business and export business win-win situation was somewhat different in Sri Lanka with regard to the laboratories covering the sectors of apparel/textile, rubber and leather that were upgraded to ISO/IEC 17025:2005 accreditation status. Even though the laboratories generated enhanced business, the volume of business was not growing at the same scale as the chemical, microbiological or calibration laboratories with business generated mainly by large scale companies. In the case of the garment sector the ISO 17025 accreditation alone was not sufficient to attract and retain clients. The laboratory had to obtain recognition from overseas retailers/labels to be in business and also had to compete with the other service providers in the country who had already gained recognition. Simultaneously some larger apparel manufacturers were setting-up and operating in-house testing laboratories with recognition from their buyers adding yet more stiff competition to the UNIDO upgraded laboratory. A similar situation is present in the rubber sector where mainly smaller SMEs used the services of the local laboratory while larger exporters again had the means to establish in-house laboratories for testing.

#### **4. Problems Encountered**

Both Sri Lanka and Pakistan represent a typical scenario where making trade an integral part of the economic growth and development policies has yet to be embraced by Government officials. Laboratories often function with a public-sector mind set and service mentality with no business outlook to promote and market the accredited services. There is also insufficient motivation of the staff, especially as they receive only public sector oriented low salary packages and few rewards with no performance measures to demonstrate the achievement of goals. Problems were also encountered with staff retention especially subsequent to providing training overseas.

In the case of accreditation through a foreign accreditation body, sustainability of such accreditation was a challenge due to the high costs of initial accreditation and reassessment. Recognizing that sustainability cannot be achieved immediately after accreditation, UNIDO supported accreditation during the first 3 to 5 years for some of the accredited laboratories. It encouraged Sri Lanka to identify a strategy to support accreditation and to mobilize own resources thereafter. This was not an easy task as the institutes were already working on low budgets. However the accredited chemical and microbiological laboratories in Sri Lanka were able to generate the necessary funds with the growing demand for services from the export sector. The staff in some of these laboratories was also sufficiently motivated with the implementation of a performance based incentive scheme developed with UNIDO assistance. In Pakistan, UNIDO in parallel to foreign accreditation, started developing the capacity of a local accreditation body towards its international recognition through Mutual Recognition Agreements with the international laboratory accreditation community.

#### **5. Lessons Learned**

Active program coordination from the major counterpart Ministry of the Government is extremely important to ease fund raising and monitoring of the program as well as to provide stakeholder ownership towards achieving the project objectives and to develop, implement and sustain the project actions.

A careful and detailed assessment of the public and private sector laboratory infrastructure in the country specifically focusing on their scope and accreditation status as well as their

clients needs to be carried out as a baseline. A careful and detailed private sector needs assessment should also be carried out prior to setting up sector specific laboratories. In parallel, a calibration laboratory with traceability to international measurement standards should be considered a priority as accredited testing laboratories as well as the export industry require access to calibration facilities with established traceability.

Laboratory upgrading and accreditation support needs to consider the costs of maintaining the accreditation status as well as the high cost of assessment/surveillance and accreditation fees from accrediting bodies to ensure sustainability. In this context, it is important to establish an in-country strategy to sustain funding for accreditation as well as to establish local, internationally recognized accreditation capacities. Staff motivation, long-term business planning, business orientation, visibility, and instilling the right mind set in the laboratory managers and staff are also critical success factors.

## **6. Conclusion (applicability to other programs)**

UNIDO's Aid for Trade related support focussing on the development of supply-side capacities and on the development of quality infrastructure has proven its relevance for enhancing trade and integration of developing countries into global markets. In the area of quality infrastructure development, priority areas for laboratory upgrading relate to chemical and microbiological testing and calibration where the scope of accreditation is to be determined based on a client/exporter needs assessment combined with a laboratory service provision assessment. Sustainability of the laboratories also needs to be planned for by encouraging business orientation, long-term planning and staff motivation ensuring a win-win situation for both the laboratories and the exporting companies.

Supporting private sector needs-based testing services towards accreditation clearly allows developing sustainable laboratory services. At the same time, it also enables better private sector access to cheaper, yet internationally recognized testing services which in turn allow more companies to access export markets. Ultimately, a larger export base, through its positive employment effects bears the potential to contribute to a stronger national export-led growth and poverty reduction.