ITU Forum on Conformance and Interoperability for the Americas and Caribbean region
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UNIDO’s Standard, Metrology, Testing and Quality (SMTQ) Services to Developing Countries

O. Padickakudi
Program Manager
Trade Capacity Building Branch
O.Padickakudi@unido.org

Presentation Overview

- Global Trade Opportunities & Challenges
- Role of Standards in Global value Chains
- Quality Infrastructure for Conformance
- UNIDO Quality Infrastructure Projects
- TCB – Global Forum & Partnerships
- UNIDO Supported Training Centres
- Cooperation Proposals
UNIDO: UN Specialized Agency with three thematic areas:

- Energy and environment
- Poverty reduction through productive activities
- Trade capacity-building

Long-term Goal:
To contribute to the achievement of the Millennium Development Goals (MDGs), in particular to poverty eradication through sustainable industrial development.

Programme Components:
- Industrial Policy, Business Environment and Institutional Support
- Enterprise Upgrading for Trade Enhancement
- Rural and Women's Entrepreneurship Development
- SME Cluster Development
- Innovation Systems, Technology Management and Foresight
- Agro-processing and Value Chain Development
- Modernization of Export-oriented Agro-industries
- Renewable Energy
- Rural Energy for Productive Use
- SME Export Consortia
- Sustainable Production in Poor Communities
- Climate Change and Industrial Energy Efficiency
- Technology Diffusion
- Cleaner and Sustainable Production
- Promotion of Domestic Investment, FDI and Alliances
- Corporate Social Responsibility for Market Integration
- Innovation Systems, Technology Management and Foresight
- Standards, Metrology, Testing and Conformity
- Corporate Social Responsibility for Market Integration
- Montreal Protocol
- Stockholm Convention

Succeeding Global Trade Participation: UNIDO 3Cs Approach

- Selecting sectors having best potential for export
- Supporting Value addition (Technology, Investment)
- Promoting SME development (Cluster, Export Consortia)
- Supporting Standards and Quality compliance
- Ensuring Sustainable industrial development (Energy, Environment)
**World’s Merchandise Exports**

Over 80% of merchandise exports - Industrial Goods

![Graph showing the value of merchandise exports from 1980 till 2010](image)

Value of Merchandise Exports from 1980 till 2010 (in millions of USD)

Source: UNCTADSTAT

**Global Value Chains: Defining Market Access**

Auditing the Value Chain – Compliance to Standards

- Product/Process standards (ISO/IEC)
- Quality Standards (ISO 9001)
- Environment Standards (ISO 14001)
- Food Safety Standards (ISO 22000)
- Labour Social Standards (SA 8000)

- Safety Standards (OSHAS)
- Testing (ISO/IEC 17025)
- Calibration
- Traceability (Farm-to-Fork)
- Private Standards (GlobalGAP)
Quality Assurance Infrastructure

Public

- Metrology
- Accreditation
- Standards

Private

- Metrology Institute
- Accreditation Board
- Standards Body

Testing Services
- Calibration
- Testing
- Inspection
- Certification

Value Chain: Producers / Exporters / Consumers

Source: UNIDO

TBT/SPS capacity-building demands linkages to International Standards & Conformity Organizations

ISO & UNIDO
reinforce partnership
for sustainable development

MoU signed on 23 June 2009 in Vienna

MOU signed at the Joint ILAC/IAF
General Assembly in Cape Town on 10 October 2004
## UNIDO’s Quality Infrastructure Tech. Assistance: $110 Mn (2009-2012)

### European Union
Bangladesh, Cameroon, Cote D’Ivoire, Malawi, Nepal, Pakistan, ECOWAS, UEMOA

### Norway
East Africa, Mekong, Sri Lanka, Bangladesh, SAARC, Zambia, Uganda, GLOBAL FORUM

### Switzerland
Vietnam, Tanzania, Ghana, Mozambique, Tanzania, Lebanon, Egypt

### Italy
Egypt, Iraq

### Sweden
Trade Trust Fund, AIDMO

### Poland
Ukraine, Moldova

### Korea
Mongolia, South-South Metrology Centre

### India
South-South Lab Testing Centre, Timor-Leste

### Finland
Trade Trust Fund

### Spain
China, Egypt

### China
China (Food safety)

## UNIDO Support to Laboratory Accreditation

<table>
<thead>
<tr>
<th>Action</th>
<th>Regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Laboratory design/ modification</td>
<td>SAARC</td>
</tr>
<tr>
<td>2. Provision of Equipment/ Reference material</td>
<td>MEKONG</td>
</tr>
<tr>
<td>3. Training in house and Overseas</td>
<td>UEMOA</td>
</tr>
<tr>
<td>4. Supporting quality manual development</td>
<td>EAC</td>
</tr>
<tr>
<td>5. Supporting PT participation</td>
<td>LAC</td>
</tr>
<tr>
<td>6. International accreditation</td>
<td></td>
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<tr>
<td>7. Business planning/marketing</td>
<td></td>
</tr>
</tbody>
</table>

No. Countries: 25  
Budget: EUR 20 mn
List of testing and calibration labs supported by UNIDO towards accreditation (ISO 17025)

- Pakistan, 20
- Bangladesh, 5
- Libya, 5
- Cambodia, 3
- Thailand, 3
- Ghana, 2
- Maldives, 2
- Vietnam, 3

List of testing and calibration labs supported by UNIDO with the intention to be accredited

- Bangladesh, 30
- Pakistan, 30
- Senegal, 15
- Burkina Faso, 10
- Benin, 8
- Côte d’Ivoire, 5
- Mozambique, 4
- Cameroon, 4
- Nigeria, 3
- Zambia, 3
- Bhutan, 3
- Gambia, 3
- Ghana, 2
- Guinea, 2
- Liberia, 2
- Mali, 2
- Mauritania, 2
- Nepal, 2
- Togo, 2
- Cape Verde, 1
- Maldives, 1
- Mongolia, 1
- Niger, 1
- Sierra Leone, 1
UNIDO Support to the enterprises with the intention to be certified

UNIDO Food Safety China (Fujian) Project
(ISO 22000 Awarding Ceremony), 08 August 2011, Xiamen
Cross Frontier Accreditations completed via UNIDO Projects

8 laboratories accredited in SRI LANKA through SWEDAC (Sweden)
- Microbiology (2); Chemical Testing (2); Garment/Textile (1); Metrology (1); Rubber testing (1); Food Testing (1)

1 metrology laboratory accredited in TANZANIA through SANAS

19 public sector laboratories accredited in PAKISTAN through NA
- Microbiology (6); Chemical Testing (6); Leather/Textile (5); Metrology (1); Electrical (1)

5 laboratories accredited in VIETNAM through NA (Norway)
- Microbiology (2); Chemical Testing (1); Metrology (2)

5 laboratories accredited in LIBYA through DAP (Germany)
- Building Material testing Laboratory (1); Metallurgy and Surface Protection Laboratory (1); Food Testing Laboratory (1); Chemical Testing Laboratory (1); Textile Testing Laboratory (1)

2 laboratories accredited in CAMBODIA through NATA & BOA (Vietnam)
- Rubber testing Laboratory (1); Microbiology (1)

3 Testing laboratories accredited in BSTI, BANGLADESH through NABL
- (Textile, food and building materials)

Cambodia Product Certification Scheme accredited by NA
Bangladesh Standards and Testing Institute (BSTI) Management System Certification Body by NA

UNIDO Support to Accreditation Bodies

- Legal framework setting the body
- Training of Assessors
- Support to running PT schemes
- Joint accreditation with MRA holder
- Examples:
  - Vietnam BOA
  - PNAC- Pakistan
  - UEMOA
  - EAC
  - SLAB- Sri Lanka
  - BAB- Bangladesh
  - MNAS - Mongolia
UNIDO’s Assistance to Metrology
Building National Measurement Capabilities

ASIA
Sri Lanka
Viet Nam
Lao PDR
Cambodia

Nepal
Pakistan
Afghanistan
Bangladesh

UNIDO-BIPM-Norad Support to AFRIMETS

Support institutional development of AFRIMETS:

1. Strategic Roadmap development
2. Pan-African Metrology School, Feb 2011
3. Strengthen technical structures (twinning with other RMOs)
4. Developing pool of assessors
5. Creation of Key and Supplementary comparisons for priority areas

Budget: € 630,000

AFRICA
Mozambique
Zambia
Ivory Coast
Ghana

EAC
Kenya
Uganda
Tanzania
Rwanda
Burundi

ECOWAS (West Africa)

Non-UEMOA
Cape Verde
The Gambia
Ghana
Guinea
Liberia
Mauritania
Nigeria
Sierra Leone

UEMOA
Benin
Burkina Faso
Ivory Coast
Guinea-Bissau
Mali
Senegal
Togo
UNIDO TCB Programmes (TA combining Supply-side & Conformity)

### BANGLADESH QUALITY SUPPORT PROGRAMME (BQSP)
Implemented by UNIDO and ITC

3-year (2006-09) programme: EUR 10 million
- National Quality Infrastructure Development
- Fisheries Sector Quality and value addition
- Textile Sector Competitiveness Development

### BETTER WORK AND STANDARDS PROGRAMME (BEST)
Implemented by UNIDO and GTZ

5-year (2010-14) programme: EUR 16.9 million for Quality, Fisheries and Textile sectors of Bangladesh

Objective of BEST is to contribute to economic growth and poverty reduction by supporting Bangladesh in taking advantage of global market opportunities

<table>
<thead>
<tr>
<th>Phase 1: National Quality Infrastructure Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Lab upgrading, PT participation</td>
</tr>
<tr>
<td>- International accreditation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase 2: Fisheries Sector Quality and value addition</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Management systems</td>
</tr>
<tr>
<td>- Good practices</td>
</tr>
<tr>
<td>- Compliance with market requirements</td>
</tr>
<tr>
<td>- Pilot certifications HACCP, ISO 9001, 14001, SA 8000</td>
</tr>
<tr>
<td>- Pilot traceability systems</td>
</tr>
</tbody>
</table>

### Pakistan TRADE RELATED TECHNICAL ASSISTANCE PROGRAMME

Budget: € 5.0 million Donor: EU

- Barrier to Trade Survey
- Study on SPS Compliance for Exports
- Standards (PSQCA)
  - Standards development
  - Certification Body (Systems)
  - Consumer affairs
  - Product Compliance
- Metrology
  - Lab upgrading, PT participation
- Product Testing (MFID, PCSIR, etc): Fisheries, Food, Leather, Textile
  - Lab upgrading, PT participation
- Accreditation
  - Organizational strengthening, international recognition
  - National accreditation scheme
  - Training of auditors
  - Setting up of PT schemes

19 Labs Accredited by Norwegian Accreditation

Phase 2: €10 Mn
Metrology & Accreditation Projects in **Cambodia & Lao PDR**

Trade Capacity Building in the Mekong Delta Countries of Cambodia, Lao PDR and Vietnam, through Strengthening Institutional and National Capacities Related to Standards, Metrology, Testing and Quality (SMTQ)

**Budget:** US$ 2.5 million  
**Donor:** Norway

- Metrology legal framework put in place
- Metrology laboratories developed
- Chemical & microbiology labs developed
- Equipment supplied
- Staff trained

Legal metrology launched by UNIDO

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Metrology & Accreditation Projects in **Bangladesh, Bhutan, Maldives and Nepal**

**MARKET ACCESS AND TRADE FACILITATION SUPPORT FOR SOUTH ASIAN LDCs, THROUGH STRENGTHENING INSTITUTIONAL AND NATIONAL CAPACITIES RELATED TO STANDARDS, METROLOGY, TESTING AND QUALITY**

**Budget:** US$ 3.5 million  
**Donor:** Norway, India

- Upgrade the required technical infrastructure for standards development and harmonization; metrology and testing laboratories required by the selected sectors; standards for labeling and accreditation of laboratories and quality systems
- National capacities for setting up HACCP, ISO9001, ISO14001 schemes at enterprise level, as well as the capacity of national certification bodies to assess the systems developed
- SAARC led regional accreditation body and a regional calibration service developed and launched
Metrology & Accreditation Projects in *Latin America and the Caribbean*

**Haiti**
- Quality infrastructure development through supporting metrology development for Haiti legal metrology entity within the Ministry of Trade and Industry
- Estimated to start in 2nd half of 2012
- Budget: € 1 million

**Ecuador (pipeline)**
- Traceability programme for the agro-industrial sector in Ecuador with special emphasis on cocoa
- Laboratory support activities:
  - Establishing and strengthening of the reference laboratories
  - Forming a network of public and private testing laboratories at the national level
- Testing scopes aims to cover those that have become increasingly important in the light of the new EU legislation

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**TCB – Global Forum & Partnerships**

- Laboratory Network Portal (Labnet)
- ISO - UNIDO publications
- South-South Training Centres
- ISO/IEC 17025 – A Practical Guide
LABNETWORK
www.labnetwork.org

In Partnership With:

The site benefits:

- **Laboratories** (environmental, metrology, testing, chemical, microbiology, textile, etc.)
- Professional laboratory staff in developing countries
- Exporters from developing countries
- Industry, in particular small and medium-sized enterprises, seeking metrology and calibration laboratories in developing countries
- Emerging accreditation/certification bodies
- Laboratories with the potential to obtain accreditation
- Academia and researchers

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Trade Standards Compliance Report 2010

**Project Objective:**
Design and establish an innovative annual publication on compliance challenges and advocating related technical assistance
Making Private Standards Work for You

A guide to private standards for suppliers in the garments, footwear and furniture sectors.

- Funded by Norad & UNIDO
- Launched in October 2010 in cooperation with Norad and CBI Netherlands
- Further cooperation with CBI, Netherlands to develop training modules based on the Guide

Contents

- The landscape of Private Standards in the apparel, footwear and furniture sectors
- Buyer Codes of conducts
- Strategies for developing country suppliers
- Trends

Building trust – The Conformity Assessment Toolbox

Published in 4 languages

- A comprehensive, user-friendly handbook covering all aspects of conformity assessment and its role in international trade
- Useful for business managers, regulators and consumer representatives
- Websites:
  UNIDO Institute for Capacity Building: http://institute.unido.org/tradecapacitybuilding.html
ISO 9001 – Its relevance and impact in Asian Developing Economies
Based on Project TE/RAS/09/003
A survey covering quality management system development, certification, accreditation and economic benefits

• **Summary:**
  - Clear empirical economic benefits to the effective implementation and accredited certification of quality management systems in the manufacturing sectors of the Asian developing countries

• **Dissemination** (as of 11th June 2012)
  - 800 copies distributed through UNIDO, ISO and IAF
  - Internet dissemination through UNIDO and ISO/TC176 Subcommittee 2

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**UNIDO Supported Training Centres**

**UNIDO-VIMTA South-South Training Facility for Testing Laboratories**
- **Hyderabad, India**
- **Target beneficiaries:**
  - Testing laboratories (Chemical, Food, Microbiology, Pharmaceutical)
  - National Standards bodies
  - Quality control laboratories for industries
  - Quality control labs of export houses
  - Import product testing laboratories
- **No. of trainees:**
  - 100 during 2010-2011
- **Funding:**
  - UCSCIC (India) - USD 273,460
  - Vimta Labs Ltd., - USD 100,000
  - UNIDO - USD 156,000
- **Launched on 20. Sep. 2010**

**UNIDO-KRISS Training Programme in Metrology**
- **Daejon, Rep. of Korea**
- **Target beneficiaries:**
  - National metrology institutes
  - Calibration laboratories
- **Parameters covered:**
  - Mass, length, volume, pressure, temperature, force and electrical
- **No. of trainees:**
  - 60 during 2011-2012
- **Funding:**
  - Govt. of RoK - € 113,000
  - KRISS - € 100,000
  - UNIDO - € 100,000
- **Launched on 26. Sep. 2011**

**UNIDO-China Food Quality Safety and Testing Training Facility**
- **Dali, China**
- **Target beneficiaries:**
  - Milk and Diary products testing labs
- **Parameters covered:**
  - Melamine in dairy products, Arsenic content in food and water
  - Linoleic acid and DHA in milk formula
  - Enterobacter sakazakii in milk formula
  - Sudan Red dye in food products
- **No. of trainees:**
  - 40 international + 50 national during 2011-2013
- **Funding:**
  - Dali Prefecture Govt: USD 200,000
  - Dali Compre. Tech & Insp. Centre USD 100,000 (in-kind)
  - UNIDO USD100,000
- **Launched on 21. Nov 2011**
## International organizations supporting conformity assessment activities

<table>
<thead>
<tr>
<th>Organization</th>
<th>Main activity</th>
<th>Standards-writing organization?</th>
<th>Develops conformity assessment standards?</th>
<th>Conformity assessment activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial development and trade capacity building</td>
<td></td>
<td>NO</td>
<td>NO</td>
<td>Provides technical assistance to developing countries, aimed primarily at developing conformity assessment infrastructures.</td>
</tr>
<tr>
<td>International standards - general</td>
<td>YES</td>
<td>YES</td>
<td></td>
<td>Only by developing standards that are used for conformity assessment.</td>
</tr>
<tr>
<td>International standards – specific to the electrotechnical sector</td>
<td>YES</td>
<td>YES</td>
<td></td>
<td>Carries out conformity assessment through the IECEx, UL and GECI schemes.</td>
</tr>
<tr>
<td>United Nations specialized agency for information and communication technologies</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td>Encourages vendors to participate in ITU’s conformity and interoperability programme, based on ISO/IEC assessments or self-assessment standards, and IAIQ Declarations of Conformity (IODCs).</td>
</tr>
<tr>
<td>Global harmonization of metrology procedures</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td>Provides basis for a single, coherent system of measurements throughout the world, traceable to the International System of Units (SI).</td>
</tr>
<tr>
<td>IAF</td>
<td>NO</td>
<td>NO</td>
<td></td>
<td>Develops mandatory, guidance and informative documents for accreditation bodies.</td>
</tr>
<tr>
<td>Global harmonization of accreditation practices for management systems, products, services, personnel and other similar programmes</td>
<td>NO</td>
<td>NO</td>
<td></td>
<td>Performs peer assessments of accreditation body members.</td>
</tr>
<tr>
<td>Global harmonization of accreditation practices for laboratories, inspection bodies and other similar programmes</td>
<td>NO</td>
<td>NO</td>
<td></td>
<td>Performs peer assessments of accreditation body members.</td>
</tr>
</tbody>
</table>

## Co-operation Proposal

- **Develop a roadmap on joint conformity assessment supporting testing laboratories development in collaboration with international partners**

- **Pursue joint technical assistance in developing such testing laboratories in pilot countries (Latin America)**
Thank You for your attention!