

Malawi

QUALITY TIMES DIGEST 



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Issue No. 7

October 2016



Malawi Quality Times Digest brings you quarterly updates on activities of the “Market Access and Trade Capacity Building Support for Agro-industrial Products” (MATCB) Project in Malawi - supported by the Norwegian Agency for Development Cooperation (NORAD) and the “Development of a Robust Standardization, Quality Assurance, Accreditation and Metrology infrastructure for Malawi (SQAM)” Project - supported by the European Union (EU), the United Nations Development Programme (UNDP) and the Government of Malawi (GoM)

In partnership with:





welcome

Welcome to the seventh edition of the Malawi Quality Times Digest - a quarterly publication related to the activities implemented by the United Nations Industrial Development Organization (UNIDO) as part of the reform process of the National Quality Infrastructure in Malawi through the MATCB and SQAM Projects.

In 2012 and 2013, Malawi embarked on two projects: the EU/ UNDP-funded SQAM Project and the NORAD-funded MATCB Project. Both projects are targeted interventions to reform the National Quality Infrastructure (NQI), and are complementary to each other. The MATCB Project focuses on legal metrology and quality improvement amongst smallholder farmers whilst the SQAM Project addresses the policy and regulatory landscape,

the institutional reform of the Malawi Bureau of Standards, the accreditation of conformity assessment services and quality improvement initiatives amongst small and medium enterprises.

This quarter, we would like to introduce our new team member, **MATCB Project Administrative Assistant, Ms Flora Katsabola** who joined UNIDO in May 2016.

After the summer break, we offer a selection of stories related to UNIDO activities which have reaped results, touching on successful partnerships amongst other highlights, with the main purpose of enabling Malawi to achieve inclusive and sustainable industrial development.

1. New calibration laboratory in Malawi to spur country's economic growth
2. Toward Future Accreditation: UNIDO Trains MBS Officers and Malawian SMEs
3. Quality and Institutional Development –Launch of the National Quality Strategy (NQS)
4. Strengthening the Technical Capacity of MBS Testing Laboratories
5. MATCB Project Steering Committee holds its sixth meeting

For more information contact:
UNIDO Department of Trade, Investment and Innovation (TII)
tii@unido.org
www.unido.org

New calibration laboratory in Malawi to spur country's economic growth

A new laboratory for calibration of heavy mass and large volume measuring instruments opened on May 19, 2016 in Blantyre, Malawi's second largest city. The modern facility, part of the Metrology Services Department (MSD) of the Malawi Bureau of Standards (MBS) will contribute to further advancing the transformation of the country's economy. The calibration laboratory was made possible thanks to the NORAD-funded MATCB project "Market access and trade capacity building support for agro-industrial products" implemented by UNIDO. Legal metrology is essential to the economic and social development of Malawi, as the country works on improving compliance with technical standards to raise consumer confidence and gain access to regional and global value chains. The Weights and Measures Act of Malawi gives the MBS the mandate to calibrate weighbridges on commissioning and a mandatory verification once a year. The enhancement of the legal metrology capability of the MBS is basic to the economic and social development of Malawi.

The handover ceremony attracted high level government officials from the Ministry of Industry, Trade and Tourism, development partners like UNDP and Norwegian Embassy, as well as members from the industry.

In his speech, Norwegian Ambassador to Malawi, Mr. Kikkan Haugen explained that the economy of Malawi is agro-based and hence issues of weights and measurements can assist towards poverty eradication. "The local framers, if provided with acceptable weights, can have value for money of their products. MBS is being supported to provide calibration, verification and inspection to the public so that Malawi could achieve SDGs", he said.

The Minister of Trade and Industry, Mr. Joseph Mwanavekha, highlighted that the upgrading of MSD of MBS will support Malawi to move away from being a dominantly importing country to becoming an exporting nation.

The Director General of MBS, Mr. Davlin Chokazinga commended support from developmental partners, including Norad, in the development of the national SQAM infrastructure. He assured that



Malawi's Minister of Trade and Industry, Mr. Joseph Mwanamvekha, Norwegian Ambassador to Malawi, Mr. Kikkan Haugen and Director of MBS Mr. Davlin Chokazinga at a walkthrough of the facilities during the handover ceremony of the new legal metrology laboratories at Malawi Bureau of Standards (MBS) in Blantyre.

MBS has acquired necessary capabilities to support productivity and efficiency through the services that the upgraded laboratory will be providing.

"The Malawian businesses and its citizens will greatly benefit from the enhancement of legal metrology. The country's commodities, goods and products will be more competitive in export markets, and citizens of Malawi will have more confidence in the quality of products and services," said UNIDO Project Manager, Mr. Juan Pablo Diaz-Castillo. "This will help Malawi achieve the SDGs, which were designed with poverty eradication, social equality and environmental protection in mind," he added. He further commended the government's commitment towards enhancing national quality infrastructure and the support from Malawi Government through the Ministry of Industry and Trade in implementing the project.

The event commenced with the tour of the reformed existing laboratories where the participants could see the calibration equipment and the capabilities that MSD of MBS has acquired as a result of MATCB project interventions. The newly constructed Heavy Mass and Large Volume Laboratory housing the Forklift, Mobile Proving Tank, 32 pieces of Heavy Mass (one tonne each), calibration laboratory for the Heavy Mass weights and the Master Meter. Moreover, UNIDO in September 2016 finalized procurement of two inspection vehicles for use by the MSD of the MBS, which will also be stationed at the upgraded Blantyre side. Those will provide for a safe transportation of teams of officers and equipment during execution of regular legal metrology inspection duties and secure transportation of the master meter system during verification of pump systems at petroleum depots. The opening of the new laboratory was part of a programme for marking World Metrology Day 2016 in Malawi. This year, it was observed under the theme "Measurements in a dynamic world" and highlighted the increasingly rapid pace of change in measurement science.



The handover ceremony marks the construction of a new calibration laboratory in Blantyre

Toward Future Accreditation: UNIDO Trains MBS Officers and Malawian SMEs

MSD inspectors enhance their knowledge in calibration services

The MBS recently revised its roadmap towards the achievement of accreditation in ISO 17025 in view of progress with the construction of the new laboratory complex, as well as various considerations of requirements for inter-comparisons, additional equipment and training. The end of 2017 marks the new realistic date forecasted to achieve accreditation. In order to support the process of future accreditation under MATCB Project, UNIDO organized a series of trainings designed for MBS metrology officers.

Trainings at the National Metrology Institute of South Africa (NMIISA) in areas of mass, volume and length metrology in view of the eventual accreditation of calibration services in ISO/IEC 17025 and in temperature metrology to ISO 17020 took place in May – July 2016. NMIISA is the only primary metrology laboratory in the SADC region and, as such, also the main source of measurement traceability for Malawi.

The trainings brought an understanding of the activities of a primary reference laboratory where measurement standards are realized to ensure traceability through various chains. The participants also expanded their knowledge in the conceptual understanding of traceability schemes in the areas concerned and gained appropriate experience to develop/improve traceability schemes in relation to metrology needs of Malawi.

“It was beneficial and it has equipped us with knowledge and competencies in carrying out calibrations”, said one of the MSD technicians, Mr. Truwe Mukhondya acknowledging the relevance of the training.

MBS officers were also trained at the South African National Accreditation System (SANAS) in various aspects of ISO 17025 Internal Auditing Course and Technical Assessing Techniques to be able to conduct internal assessments. Furthermore, MBS Metrology officers have participated in the Mass Balance proficiency testing (PT) scheme coordinated for laboratories in Southern Africa by the National Laboratory Association (NLA) during the time of the International Test and Measurement Conference and Workshop in South Africa in September 2016. These calibration services are primarily required to ensure the traceability of Legal Metrology verification services performed by the MSD of MBS.

Women and youth led SMEs learn how to comply with quality requirements

The UNIDO intervention in Malawi aims to contribute to a more adequate, effective and sustainable NQI in Malawi in accordance with international and regional principles and practices (e.g. Common Market for Eastern and Southern Africa, Southern African Development Community), by supporting the enhancement of the performance of the MBS. This will have direct implications in terms of benefits for Malawian enterprises through improved business services provided by the NQI and in the long term, in terms of improved protection of consumer rights of Malawian citizens.

UNIDO expert in Implementation of ISO 22000 Quality Management System (QMS), Ms. Anya Knoetze in cooperation with the Director, Quality Assurance Services (DQAS) of the MBS provided technical assistance to three (3) companies in Malawi. These companies which all have MBS certified products and advanced implementation of QMS, were selected based on their willingness and commitment to QMS and their availability for the MBS certification as part of accreditation process for the MBS in terms of ISO 17021 (Conformity assessment - Requirements for bodies providing audit and certification of management system).

The inception mission of the expert undertaken under SQAM project is a part of the process towards strengthening the capacity of SMEs (particularly women and youth led enterprises) to comply with quality requirements (HACCP / ISO 22000 Food safety management systems). The expert held a training course in ISO 22000 to twenty-eight participants evaluated the current level of implementation of the particular QMS at the companies and agreed on a plan of action. The inception mission will then be supported by further missions in accordance with the plan of action to document their progress and provide sound follow up.



Series of international trainings organized by UNIDO in May-September 2016 to strengthen the knowledge of MBS metrology officers in calibration services.

Quality and Institutional Development - Launch of the National Quality Strategy (NQS)

Based on the National Quality Policy (NQP), one of the major achievements of the UNIDO programme in Malawi, the National Quality Strategy (NQS) was officially launched on May 18, 2016 in Blantyre to guide its implementation. The strategy aims at improving the competitiveness of production value chains in order to expand the export performance of Malawian products worldwide to achieve the inclusive and sustainable industrial development of the country. The event attracted officials from the government, Development partners, MBS, Industry, Universities and private sector.

Through the Ministry of Industry and Trade (MoIT), the Government of Malawi approved the NQP in 2014 to reform the National Quality Infrastructure (NQI) in Malawi to enable quality environment, Industrial productivity and consumer rights protection.

In his welcome remarks, the Director General of MBS, Mr. Davlin Chokazinga acknowledged that the launch is a crucial milestone in the development of the NQI in Malawi. "Without the National Quality Policy and Strategy it is difficult to attain the government goal of turning Malawi into a producing and exporting country. Without a credible quality infrastructure, it is virtually impossible to increase the range of exports", he added.

The Deputy Resident Representative (DRR) of UNDP, Ms. Carol Flore commended the MoIT, the lead Ministry for the NQS and the MBS for its invaluable support to the process of launching the roadmap towards the implementation of the NQP. "The developed NQI fits well with the "Buy Malawi" Strategy that aims to instill a quality culture amongst Malawians and incentivize the private sector to produce goods and services that meet the needs of the consumer in terms of both standards and quality.

Based on the feedback from the private sector, there is general consensus that the "Buy Malawi" Strategy is a critical contributor towards building the quality infrastructure, as it aims to promote products that are being processed by the Malawian Industry", she concluded.

"Formulation of NQP and launch of NQS – those two blue prints provide a clear demonstration of Government's intention to inculcate a quality culture through creation of a credible quality infrastructure and creation of awareness amongst Malawians own need to place emphasis on producing quality products and to actualize the National Export strategy through the production and verification of products that are exportable and perceived as credible in foreign markets", said the Guest of Honor, Chief Director of Ministry of Industry, Trade and Tourism, Mr. Charles Kambauwa who officially launched the NQS.

Furthermore, he highlighted the enactment of the Metrology Bill in March 2016 as one of the major milestones achieved through the implementation of the NQP. The new Metrology Act seeks to provide an internationally accepted verification system for weights and measures through the acquisition of credible verification equipment at MBS. It also provides a basis for regulations and mechanisms for strict enforcement of the law with respect to offences related to Metrology covering both inspectors and traders. For instance, the penalties for tampering with a weighing instrument will be as high as k500, 000.00 from a custodial sentence of up to three years for penalty defaulters once the bill is passed.

Both Timelines for the Quality Policy and Metrology Law are available in issue no 1 of this Newsletter (December 2014).



Launch of the National Quality Strategy (NQS) held on May 18, 2016 in Blantyre

Strengthening the Technical Capacity of MBS Testing Laboratories

The MBS is the National Enquiry Point required by the World Trade Organization under the Agreement on Technical Barriers to Trade. The MBS sets and implements standards and conducts conformity test on selected imports and exports. There is a strong perception that market demand for conformity services, particularly with regards to testing and calibration services for the private sector, is higher than currently available. However, exporters from Malawi are at present disadvantaged by the lack of internationally accredited testing facilities for certification of products for export.

The SQAM project is being implemented to contribute to a more adequate, effective and sustainable NQI in Malawi in accordance with regional and international principles and practices by supporting the improvement of the performance of the MBS. This in turn, has a direct impact in terms of benefits for the Malawian enterprises through improved business services provided by the NQI and in long term providing improved protection to consumers, maintenance of the facilities in general with specific emphasis on the laboratories, with the aim of boosting the knowledge of the staff working in the testing services department. UNIDO organized a series of out of country trainings in line with the Training Requirements Plan. The trainings held focused on: Methods of Determination for Pesticide Residues, Microbiological Methods for Meat and Poultry and Methods for Determination for Drug Residues in Fish, Meat and Poultry at IFSTL of the University of Maryland in USA.

IFSTL is a dedicated permanent laboratory training facility for food safety methods focusing on the detection of contaminants, both microbial and chemical, of health and trade relevance. The IFSTL is a program within the Joint Institute for Food Safety and Applied Nutrition (JIFSAN), an FDA Center of Excellence. As such, the IFSTL benefits from strong ties with US and international government organizations that facilitates the participation of regulatory scientists with extensive experience in food safety monitoring, and enforcement testing requirements as instructors in any given workshop.



An HPLC system for the advancement of aflatoxin determination was delivered to MBS under the SQAM project.

Additionally, UNIDO provided technical support to procure and install key equipment (Atmospheric Distillation Analyzer, Ion Chromatograph) to enhance the testing capabilities of MBS. During the installation process staff members were well trained on how to operate the equipment and service delivery to the private and public sector has improved as the equipment produces test results immediately after carrying out a test.

With regards to accreditation of the testing laboratories at MBS, it is an important step considering the newly acquired state of the art equipment and the training of its employees.



Key equipment for the enhancement of testing capabilities of MBS was provided with UNIDO assistance to Malawi Bureau of Standard (MBS)

MATCB Project Steering Committee holds its sixth meeting

The Chief Director of Trade, Mr. Charles Kambauwa from the Ministry of Industry, chaired the sixth Steering Committee (SC) Meeting of the MATCB Project in Lilongwe on May 19, 2016. The UNIDO Project Manager, Mr. Juan Pablo Diaz-Castillo from UNIDO HQ in Vienna, participated in the meeting to review milestones, progress achieved and to provide guidance for the successful implementation of the UNIDO project. One of the two beneficiaries of the MATCB Project was represented by the Deputy Director General of MBS, Mr. Willy Muyila. NASFAM was represented by Programme Coordinator, Mr. Richard Petautchere. Other meeting participants included UNIDO representatives: Chief Technical Advisor for the project, Mr. Francois Denner, and Mr. Jackson Hau, National Project Coordinator. All parties shared success stories of the achievements in the project and expressed satisfaction with the level of implementation.

The SC focused on the implementation logic – the completion of the physical infrastructure of MSD of MBS marked the beginning of an equipment procurement cycle and the organization of

trainings. Furthermore, it highlighted the focus of the project with regards to the NASFAM component, for certification in MS 21 which is based on the principles of HACCP. It is the first certification requirement in Malawi for NASFAM to achieve certification of products for sale by local retailers. An important part of the meeting were the discussions related to the departure of NASFAM focal point, Mr. Kingsley Makiyoni, Business and Marketing manager and the need to appoint his successor. A key aspect of the agenda was the formal request to NORAD for extension of the MATCB project until December 2017, which was endorsed following a revised work plan submission to donor. UNIDO PM introduced the Project Administrative Assistant, Ms. Flora Katsabola to the meeting who commenced her work in May 2016. High on the meeting's agenda was also the successful hand-over ceremony of the upgraded MSD of MBS. The seventh meeting of the MATCB project SC will be held on November 9, 2016.



The Sixth MATCB Project Steering Committee, May 19, 2016, Lilongwe

Main highlights of the UNIDO Programme in Malawi:

- National Quality Policy (NQP) validated and disseminated; approved on January 2014
- National Quality Strategy (NQS) completed (5 year implementation plan); approved in May 2016
- Seventeen staff from Malawi Bureau of Standards (MBS) were sent for Out-of-Country Training at internationally recognized institutions.
- Eighty one MBS officers were trained on the following courses:
 - Training on Principles of Metrology (Eight MBS officers)
 - Training Course ISO/IEC 17025:2005 (Seventeen MBS officers)
 - Lead Auditors Course on Quality Management - ISO 9001:2008 (Group 1) (Ten MBS Officers)
 - Lead Auditors Course on Quality Management - ISO 9001:2008 (Group 2) (Ten MBS Officers)
 - Training Course ISO/IEC 17021:2011 (Eighteen MBS Officers)
 - Training Course ISO/IEC 17065:2012 (Eighteen MBS Officers)
- Twelve MBS Lab technicians were trained on the following course:
 - Training on Uncertainty of Measurement - Testing Laboratories (Twelve MBS Lab. Technicians)
- Forty seven participants were trained on ISO 22000
 - Thirty eight industry/university/associations
 - Eight MBS officials
 - One project participant (UNDP SQAM)
- Forty five participants were trained on ISO/IEC 17025:2005
- Twenty participants were trained on IRCA approved ISO 22000 Food Safety Management System lead auditor courses.

Successful completion of ISO 22000 Training Programme delivered by IE Anya Knoetze



Glossary Legal Metrology

ACCREDITATION: formal process that assures the quality of organisations and the work they carry out.

ACCURACY: closeness of the agreement between measurement result and true value.

BASE UNIT: fundamental unit of measurement on which other units are based.

BIAS: the opposite of trueness, as occurs when the indication of a measuring instrument is consistently too high or low.

CALIBRATION: comparison of an instrument against a more accurate one (or against a reference signal or condition), to find and correct any errors in its measurement results.

CONFIDENCE (LEVEL): number (e.g. 95%) expressing the degree of confidence in a result.

CORRECTION: number added to an instrument reading to correct for a bias.

DECIMAL SYSTEM: a system based on the number 10.

ERROR: deviation from the correct value.

MEASURAND: quantity being measured, such as time or flow-rate.

METROLOGY: the science of measurement.

METRIC SYSTEM: a decimal system of units based on, among other units, the metre.

PRECISION: a measure of the scatter of a number of measured values.

REPEATABILITY: closeness of the agreement between repeated measurements of the same thing carried out in the same place, by the same person, on the same equipment, in the same way, at similar times.

REPRODUCIBILITY: closeness of the agreement between measurements of the same thing carried out in different circumstances (e.g. by a different person or a different method, or at a different time).

TOLERANCE: the maximum permissible difference between an actual value and its specification.

TRACEABILITY: a measurement is traceable if it can be connected to national or international standards through an unbroken chain of comparisons.

TRUENESS: closeness of a measurement to the average of a large set of measurements.

UNCERTAINTY (OF MEASUREMENT): quantified doubt about the result of a measurement.

VALIDATION: confirmation that some aspect of a measurement process is fit for purpose.