



**27th ASIA-PACIFIC LEGAL
METROLOGY FORUM
ONLINE MEETINGS
3-4 December 2020**



Economy Report - 2020

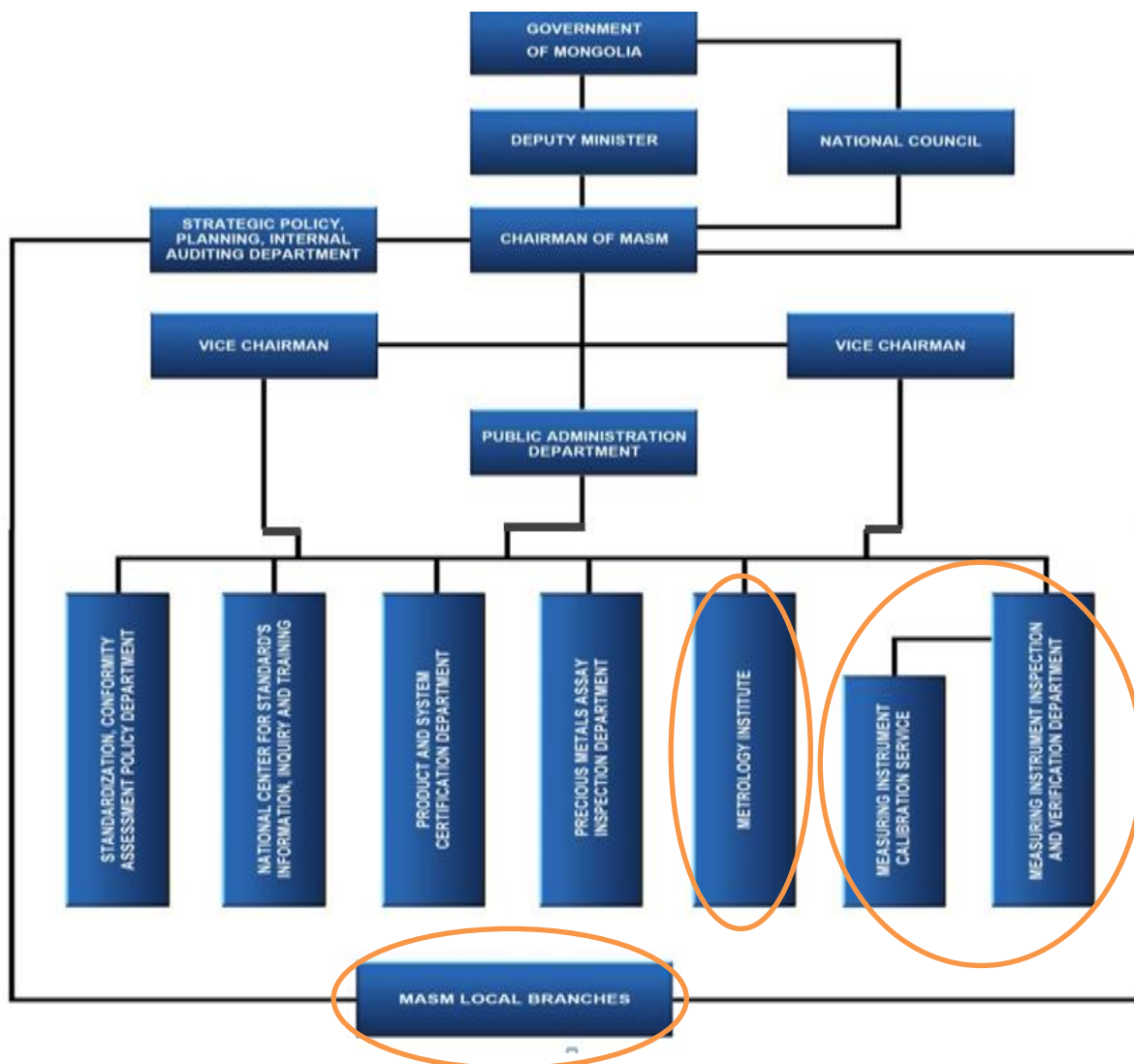
Mongolia

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SECTION 1 – Organisation and structure for metrology

Organisation structure

Organization chart of MASM



Mongolian agency for Standard and Metrology (hereinafter referred to as MASM) including 20 local province centers for Standard and Metrology is regulatory agency of the government of Mongolia, supporting to the implementation policies and programs of the Mongolian government for improvement of national society and economy, industry, technology, trade and services by activities of standardization, METROLOGY, conformity assessment and assay control.

MASM has expanded into 7 departments, standardization, technical regulation and conformity assessment, metrology institute, measuring instruments verification, assay inspection, certification of product and system, monitoring and national centre for information and training. The MASM has about 420 employees and it provides occupational

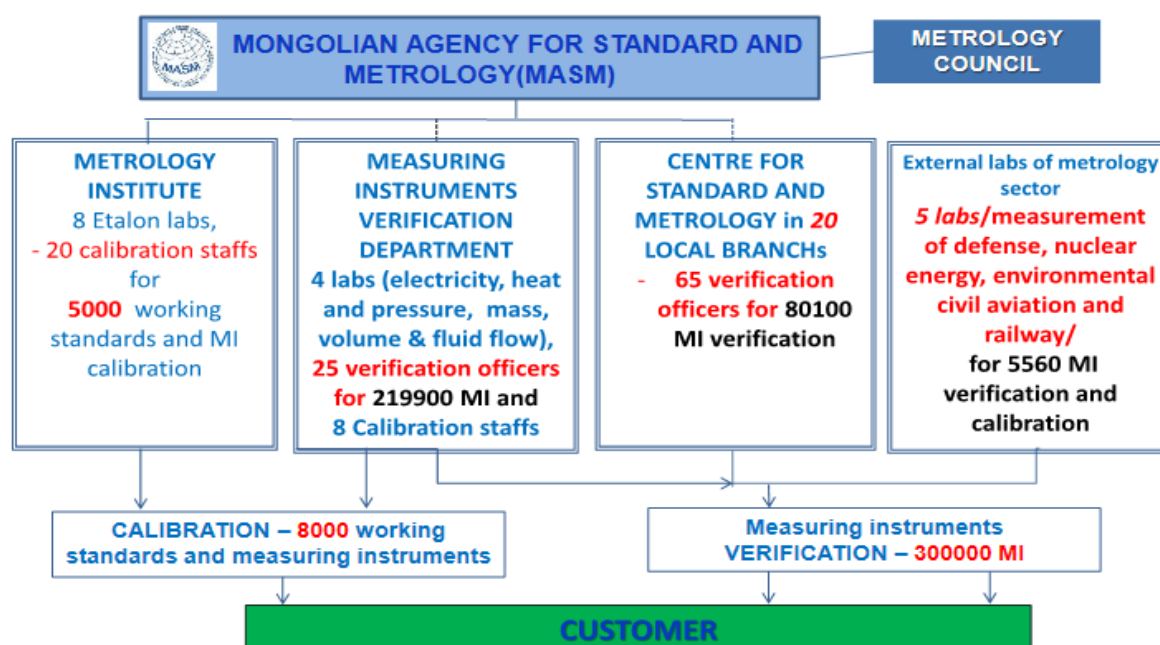


and methodical management to the local branches about Standardization and Metrology in 20 provinces.

Table.1 Organization and key contact persons of MASM

No	Position	Name	E-mail address	Position in APLMF
1.	Chairman of MASM	Mr. Bilguun Boldbaatar	b.bilguun@masm.gov.mn info@masm.gov.mn	Representative of APLMF
2.	Director of MASM Metrology Institute	Mr. Dambasuren Davaa	dambaa@masm.gov.mn	contact person of APLMF
3.	Head of Department of Verification of measuring instrument	Mr. Bayarkhuu	bayarkhuu@masm.gov.mn	contact person of APLMF
4.	Senior specialist and Quality manager of MASM Metrology Institute	Mrs. Narangerel Dalaijamts	narangerel@masm.gov.mn	contact person of APLMF
5.	Senior specialist of type testing and type approval of measuring instrument , MASM	Mrs. B.Baigalmaa	baigal_b@masm.gov.mn	-
6.	Senior specialist for legal metrology aspects of MASM	Mrs. Badamkhand Davaasamby	badamkhand@masm.gov.mn	-

Structure of Metrology in Mongolia



MASM Department of measuring instrument verification and 20 local province centers for Standardization and Metrology are carried out initial and subsequent verification of measuring instruments such as of mass, electricity power



and heat, pressure and volume flow, motion parameter measurement, according to the Law on Metrology and relevant rules.

Metrology institute is one of the departments of the MASM. Its main activities are followings:

- identifying metrology policy to develop metrology;
- developing metrology laws and regulations in conformity with international standards and principals, and control of implementation of legislation;
- establishment, maintaining and development of measurement unit standards;
- traceability of standards;
- calibration of working standards and measuring instruments;
- type testing and pattern approval of measuring instruments;
- registration and conducting assessment for metrological service;
- trainings;
- Internal and International cooperation and others.

Legislative Frameworks

The Parliament of Mongolia approved the Mongolian Law on Metrology on May 9th, 2019. Since July 2019, the Law on Metrology has been newly regulating metrology issues in Mongolia.

Regarding implementation of the new Law on Metrology, MASM is working up-to-date and newly developing regulatory documents such as following rules and procedures for metrology activities. Where:

- Procedure for verification of measuring instruments
- Procedure for type testing and type approval of measuring instruments
- Procedure for registration and conducting assessment of organization, which is performing import, produce, installation and repair of measuring instruments
- List of legally controlled measuring instruments
- Verification and calibration fee
- Rule of Council on Metrology
- Procedure for unit of measurement , its writing and use
- Procedure for conducting metrological control on pre-packed product
- Procedure for attestation on Verification officer
- Procedure for registration and conduct assessment of Professional organization of metrology(DI and NB)
- Procedure for conducting assessment of calibration staffs and its authorization e.g.

Approval

Under construction



International arrangements and engagement

Membership of MASM for metrology:

- OIML – International Organization for Legal Metrology, as corresponding member, 1998
- APLMF - Asia Pacific Legal Metrology Forum, as state member, 1999
- APMP – Asia Pacific Metrology Programme, as state member, 2002
- CGPM - General Conference on Weights and Measures, as associate member, 2013
- Signature of CIPM MRA, 2013.

Bilateral cooperation:

- KRIS – Korea Research Institute of Standards and Science
- UNMZ - The Czech Office for Standards, Metrology and Testing , Czech
- PTB- National Metrology Institute of Germany
- NIM - National Institute of Metrology of People’s Republic of China
- ROSSTANDART – Federal Agency on technical regulation and metrology ,Russia
- SAMR- State Administration of Market Regulation of People’s Republic of China.

Implementation of projects for metrology:

1. 2016 - the National Quality Program of Mongolia
2. Since 2012, Implementation PTB followings projects supporting by Ministry of Economy and technical cooperation of Germany:
 - Supporting quality infrastructure under special consideration of the energy sector
 - Supporting quality infrastructure under special consideration of the mining sector.
3. Participating in the activities organized by APMP/APMLF MEDEA2 project and the knowledge and experience we have gained, we aim to implement the following activities:
 - Implementation of the new law on Metrology, which has been approval by the Parliament of Mongolia;
 - Development of Policy on Metrology in Mongolia;
 - MASM very firstly published 16 CMCs in KCDB in July, 2020 in mass area.
 - MASM conducted mostly online meetings and trainings 2020 in topics of the legal metrology inspection, pattern approval test, verification and calibration of measuring instruments.
4. Since 2018, implementation MASM and NIM joint project supported by Ministry of Science and technology of Mongolia and Republic of China, Where:
 - China-Mongolia Joint Research on Key Measurement Standards and Technologies in Energy”.
5. MASM colleagues attended on followings international online meetings, trainings, workshops and webinars. Where:



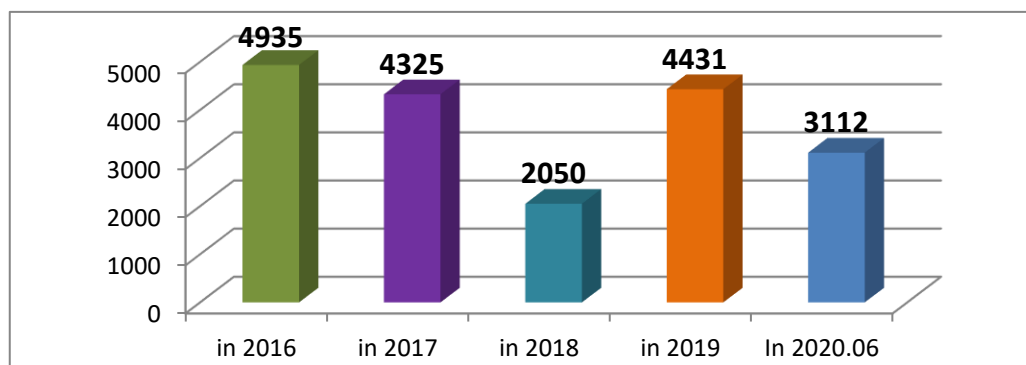
- BIPM Webinar-KCDB 2.0-CMC writers in general physics, 9 June 2020;
- 2020 e-learning courses on "introduction to measurement & metrology, introduction to measurement uncertainty & uncertainty budgets, understanding and evaluating measurement uncertainty" organized by UK's National Measurement Institute, NPL,
- Webinar: Science communication for metrology, 19 June 2020
- APMP Mid Year meeting activities, June 2020
- PTB- Online training on Infra-Red Thermometer, July 2020;
- Webinar on Infrared Thermometers, 8 July 2020;
- International Online Workshop - Metrology 4 Digital Transformation, 5-8 Oct 2020;
- PTB- International DCC Conference 20-21 October 2020;
- APMP GA activities November, 2020
- APLMF 27th meeting December, 2020 ...

SECTION 2 – Key activities of 2019/2020

Working with industry

1. There are knowledge's transferred to 1500 participants by more than 20 training courses organized in metrology infrastructure, Metrology in general, mass, volume, electricity, length and pressure measurement.
2. The MASM calibration service is shown below in the last 3 years:

Number of calibration certificate



3. Customer calibration needs are increasing every year.

Protecting consumers

Following activities have been carried out in the framework of consumer protection:

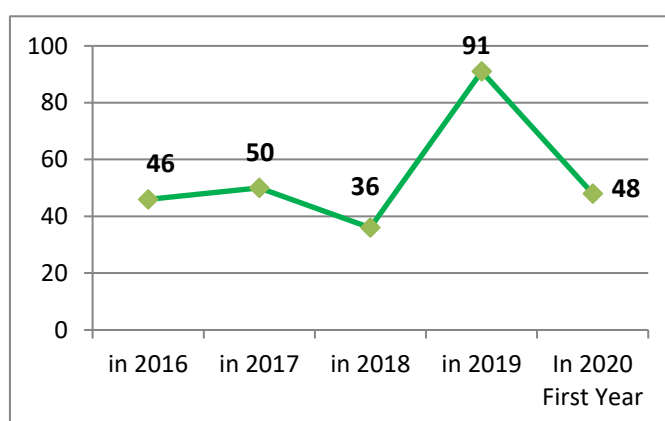
- Some regulations on consumer protection have been included in the new law on Metrology.
- MASM organized several meetings and discussions about introduction of the new law on Metrology.



- In order to raise awareness about metrology and measuring instruments, MASM participated in various well known TV programs and talk shows, in which MASM provided information on its operation and the new law on Metrology.

Main activities of legal metrology services as follows are focused to consumer protection:

Metrology service	In 2019		In 2020.10	
	Quantity /piece/	Revenue /million MNT/	Quantity /piece/	Revenue /million MNT/
Verification of measuring instrument	218293	1618.1	194206	1584.4



Number of type approval certificate for last 5 year

5 Major projects - What we did and what we learned

1. As implementation of the National Quality Program in Mongolia we carried out following actions:

1.1 Within the framework of reform of legislative on metrology:

- In 2019 the Parliament of Mongolia approved the law on Metrology;
- The law on Metrology is newly regulating followings aspects:
 - To provide technical regulations of measuring instrument;
 - to create professional organization for metrology as DI or ND;
 - to create state integrated data base of metrology
 - consumer protection and it's right and e.g.

1.2 within the framework of strengthening technical capacity for metrology operations to organize capacity building of MASM's staff in the framework of MEDEA project and in cooperation with PTB and NIM;

1.3 However, there is no financial support from the Mongolian side to improve the capacity of the reference standard to use for metrology activities.

1.4 State verification officers and experts of MASM conducted type testing of measuring instruments and training on verification in frame of the topic on flow measurement and calibration (FMC), traceability in rice moisture measurement, CNG dispensers, fuel dispensers, mass standards, water meters, pre-packaged goods, and weigh bridges. They also gained experience and practice learning from the ISO or OIML Standards and APMLF member organizations test procedures.

SECTION 3 – Future focus

New initiatives planned (next 1-2 years)

Following changes will be made in upcoming 1-2 years after the enactment of the Law on Metrology, in the framework of implementation of National Quality Program:

- activities on raising awareness on Law on Metrology;
- Policy and program on metrology shall be developed and implemented;
- type testing of measuring instruments used in health, national and environmental security and military shall be conducted by professional bodies in the related field;
- if necessary, special specifications on measuring instruments used in health, national and environmental security, trade and services shall be defined by technical regulations;
- propositions shall be made on increasing state budget or implementing projects on strengthening capacity of legal metrology laboratories, especially local laboratories;
- newly published OIML standards and internationally recognized methodologies on measuring instrument verification and type testing shall be adopted and implemented and
- capacity building trainings for legal metrology trainers shall be organized.

Emerging issues – challenges and opportunities

Following challenges and opportunities were defined in our legal metrology activities:

- The new Law on Metrology approved in Mongolia;
 - Introduction and Enforcement of the new law on Metrology;
 - Designated professional institutes for metrology will be carry out legal metrology activities such as measuring instrument verification and type testing;
 - At present, as the workload increases year by year for calibration, type testing and verification of measuring instruments.
 - We would like to continue participating in trainings and workshops organized in frame of APMP/APLMF MEDEA 3 projects.
2. Following challenges were defined in our legal metrology activities:
- Due to the legal metrology services in Mongolia, it is necessary to increase amount of the budget to implement improvements and upgrades for reference and working



standards, qualification of metrology employees, laboratory environmental conditions;

- Depending on lack of sufficient technical capacity including personnel, laboratories and measurement standards, the legal metrology activities, such as same of measuring instruments testing and verification of MASM and its provincial centres for metrology can't carry them out in accordance with international standards completely. Therefore, it is necessary to implement a project on strengthening capacity of legal metrology;

