



**26th ASIA-PACIFIC LEGAL
METROLOGY FORUM AND
WORKING GROUP MEETINGS**
6-8 November 2019, Ha Long City,
Quang Ninh Province, Viet Nam



Economy Report - 2019

BRUNEI DARUSSALAM

Report developed by	Mr Noriskandariah Damit
Position	Head of Measurement Standards Laboratory
Organisation	Measurement Standards Laboratory
Contact details	Measurement Standards Laboratory Department of Scientific Services Ministry of Health Halal Science and Metrology Centre Building Block B6, No. 31, simpang 32-66, Kg. Anggerek Desa, BB3713 Negara Brunei Darussalam Tel: +673 2383155 / +673 2383142 Email: metrology@moh.gov.bn Website: http://www.moh.gov.bn

SECTION 1 – Organisation and structure for metrology

Organisation Structures

Measurement Standard Laboratory (MSL) is one of the nine sections under the Department of Scientific Services, Ministry of Health (refer Figure 1). The main role of MSL is to provide scientific & legal metrology support for industries, enforcement, export trade, environment & health policies, foreign direct investment and social development that are traceable and recognized internationally.

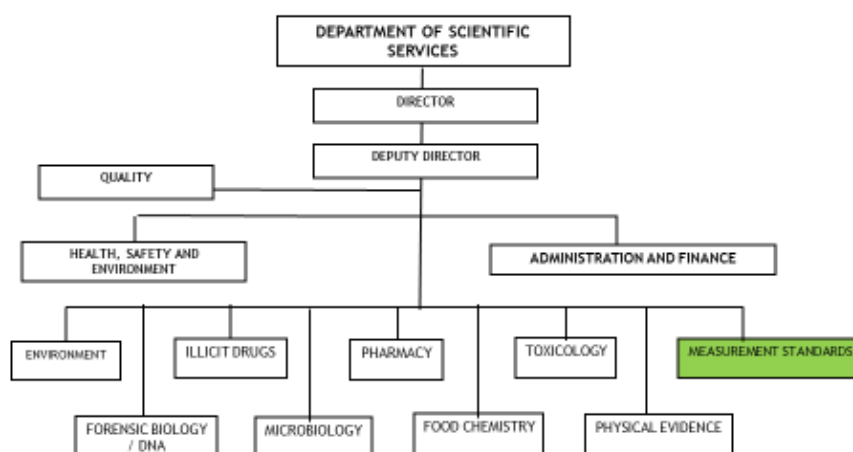


Figure 1: Organisation Structure for Department of Scientific Services

MSL consist of National Laboratory, Industrial Calibration, Legal Metrology and International Relations (refer Figure 2). The functions of MSL are as follow:

1. To support the development of national quality infrastructure through Brunei Darussalam Metrology Infrastructure by coordinating both legal and scientific metrology activities.
2. To develop and maintain national measurement standards as the national metrology laboratory in Brunei Darussalam.
3. To support activities of enforcement agencies via legal metrology traceability as the national metrology body in Brunei Darussalam.
4. To provide calibration services to industries, government & private laboratories, law enforcement and clinic & hospitals in assisting organizations in fulfilling standard and quality requirements.
5. To be the national focal point in metrology activities for national and international platform. (National Metrology Board, ASEAN COST-EGM, APMP, APLMF).
6. To provide training and consultation to both public sectors & private industries.

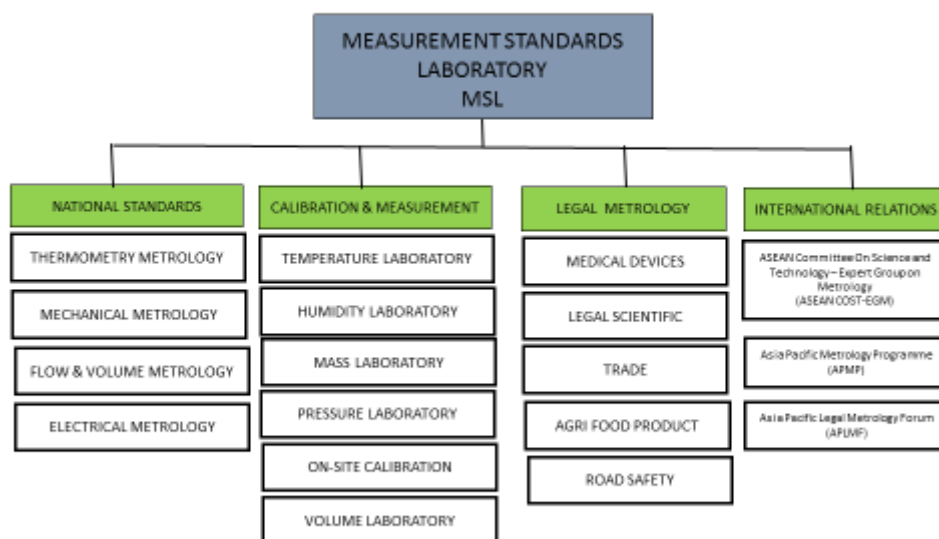


Figure 2: Organisation Structure for Measurement Standards Laboratory

There are several metrology fields that are handle by various Regulatory Body in Brunei Darussalam which can be categorised as Local Metrology Authorities as mentioned below (refer Figure 3):

Local Metrology Authorities In Brunei Darussalam

No	Metrology Field	Local Metrology Authorities
1.	Domestic Trade	1. Weight & Measures Division (Ministry of Energy, Manpower and Industry). 2. Royal Customs & Excise, Ministry of Finance and Economy
2.	Medical Devices	1. Healthcare Technology Department, Ministry of Health
3.	Road Safety	1. Land Transport Department, Ministry of Transport and Info-communications 2. Royal Brunei Police Force, Prime Minister Office
4.	Land Survey	Department of Land Survey, Ministry of Development
5.	AgriFood Product	Department of Agriculture and Agrifood, Ministry of Primary Resources and Tourism
6.	Construction	Authority of Building and Construction Industry, Ministry of Development
7.	Import Taxation	Royal Custom & Excise, Ministry of Finance and Economy
8.	Legal Scientific	Department of Scientific Services, Ministry of Health (Forensic DNA Section, ILLICIT Drug Section, Physical Evidence Section, Toxicology Section)
9.	Utility Devices	1. Department of Electrical Services, Ministry of Energy, Manpower and Industry 2. Department of Water Services, Ministry of Development

Figure 3: Local Metrology Authorities (Regulator Body) In Brunei Darussalam

According to the National Quality Infrastructure (NQI), MSL is responsible to provide Metrological Traceability for the Conformity Assessment Bodies (CABs) in Brunei Darussalam (refer Figure 4). At the moment MSL is closely working together with the National Standards Centre is in developing the Brunei Darussalam NQI Act.

National Quality Infrastructure (NQI)

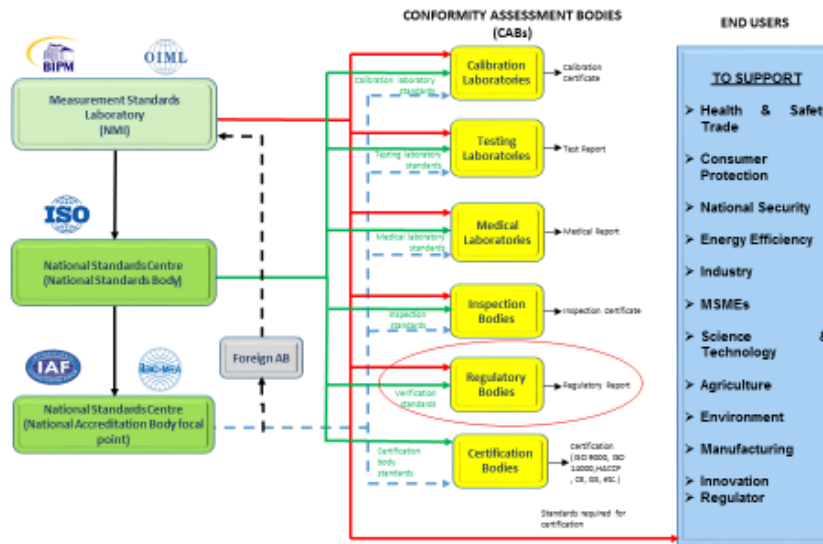


Figure 4: Brunei Darussalam Quality Infrastructure (NQI)

Legislative Frameworks

MSL is responsible to establish the Brunei Darussalam Metrology Infrastructure in order to support the Brunei Quality Infrastructure (NQI). MSL will be the one to coordinate the activities in Brunei Darussalam both legal and scientific metrology. The Brunei Darussalam Metrology Infrastructure is consist of the establishment of National Metrology Board and National Measurement Order with related regulations (refer Figure 5).

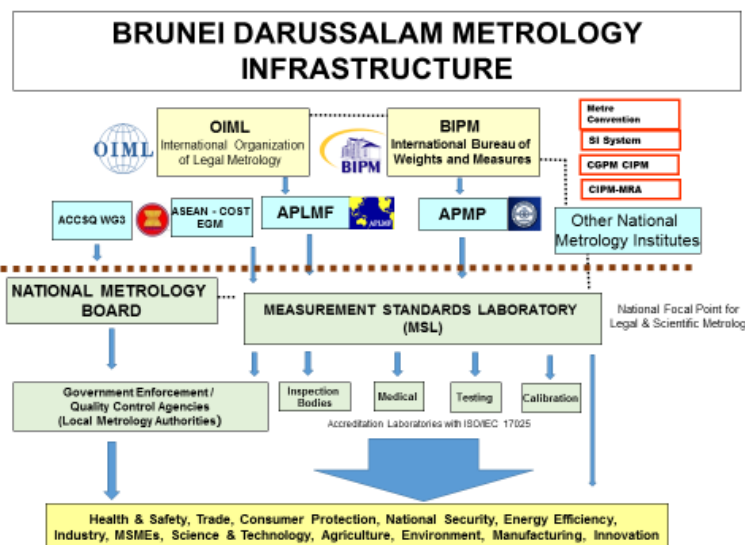


Figure 5: Brunei Darussalam Metrology Infrastructure

International arrangements and engagement

Brunei Darussalam have been participating the metrology activities both through meeting and workshop in the Asia Pacific Region and ASEAN level as mentioned below:

1. Asia Pacific Metrology Programme (APMP)
Brunei Darussalam as full member since 18th April 2018 where Measurement Standards Laboratory as the national representative.
2. Asia Pacific Legal Metrology Forum (APLMF)
Brunei Darussalam as full member since 1st November 2017 where Measurement Standards Laboratory as the national representative.
3. ASEAN Experts Group on Metrology (ASEAN COST EGM)
Brunei Darussalam as member of ASEAN COST EGM.
4. ASEAN Consultative Committee For Standards And Quality- Working Group 3 (ACCSQ WG3)
Brunei Darussalam as member ACCSQ WG3.

SECTION 2 – Key activities of 2018/19

Working with industry

Rice Moisture Measurement.

Rice is a staple food in Brunei Darussalam plays an important role for the economic growth as it is an excellent way making society to be self-sufficient and sustainable by producing their own food (food security). His Majesty the Sultan of Brunei Darussalam has been supportive and constantly encouraging the nation to be self-reliant through farming especially in rice production.

The Measurement Standards Laboratory is continuously working with the Agriculture and Agrifood Department in developing traceability for the Rice Moisture Measurement in Brunei Darussalam. The purpose of this traceability development is to ensure the highest quality of rice in Brunei Darussalam and to protect consumers.



Figure 6: Discussion



Figure 7: Demonstration

Pre-Packaged Product.

Brunei Darussalam is constantly committed in establishing pre-packaged product requirement by fulfilling the ASEAN Common Requirements of Pre-Packaged Products (ACRPPP) and OIML R87, R79. Training for Pre-Packaging Food was conducted by the National Metrology Institute of Malaysia (NMIM) for 4 days, from 30th April to 3rd May 2018. Various government agencies attended the training such as Weights & Measures, Measurement Standards Laboratory, Agriculture & Agrifood Department and Department of Fisheries. The target of the establishment of Pre-Packaged Product compliance to the ASEAN Common Requirement of Pre-Packaged Products (ACRPPP) is to strengthen Brunei Darussalam in supporting of ASEAN Single Market.



Figure 8: Pre-Packaging Product Training Conducted by NMIM & Instruments used.

Protecting consumers

Weights & Measures, Ministry of Energy, Manpower and Industry is responsible for consumers protection in Brunei Darussalam through activities of verification, inspection and enforcement the weights and measures instruments used for domestic trade purposes according to the Weights & Measures Act 1983, Chapter 151 and its regulation.

Services carried out by Weight and Measures are as follow:

1. New registration of weight or measures equipment.
2. Verification and Re-verification Heavy & Light Duty equipment with respect to four districts.
3. Verification and Re-verification at Customer Premises with respect to Heavy Duty equipment.
4. Verification and Re-verification on Special Request.
5. Verification and Re-verification for Government Equipment.
6. Approval Authorisation for Agent Suppliers to supply and sell Weight & Measures Equipment.

The weighing equipment will be inspected and verified, and when authorized to use, is stamped with a verification sealer that will be attached onto the equipment.

The weights and measures instruments of Inspection and verification are as follows:

1. Light Duty equipment:

Spring Balance, Electronic Balance, Linear Measurement, Liquid Measurement, Beam Scale, Platform Scale



Figure 9: Electronic Balance



Figure 10: Platform Scale



Figure 11: Spring Balance



Figure 12: Fish Farm



Figure 13: Mobile Van



Figure 14: On-Site Verification

2. Heavy Duty equipment:

Batching Plant, Asphalt Plant, Weighbridge, Flowmeter, Mastermeter & Fuel Dispenser



Figure 15: Fuel Dispenser Verification



Figure 16: Water Village Petrol Station



Figure 17: Weightbridge Verification



Figure 18: Flow Meter Verification



Figure 19: Asphalt Plant



Figure 20: Batching Plant

SECTION 3 – Future focus

New initiatives planned (next 1-2 years)

The National Metrology Board.

The proposal of the establishment of the National Metrology Board for Brunei Darussalam has been drafted by the Measurement Standards Laboratory. The proposal was included with the creation of the National Measurement Order and its regulation. The main purpose of the establishment of the National Metrology Board is to coordinate all scientific and legal metrology activities in Brunei Darussalam according to the National Metrology Infrastructure in line with international metrology guidelines through (refer Figure 21):

- I. Promote and support NQI in Brunei Darussalam i.e. National Metrology Infrastructure.
- II. Reported metrology activities to the Minister
- III. Facilitate Legal Metrology e.g. International Trade, Health, Road Safety
- IV. Improving Industry Competitiveness
- V. Ensuring Equity In The Market
- VI. Improve Life and Environmental Quality.

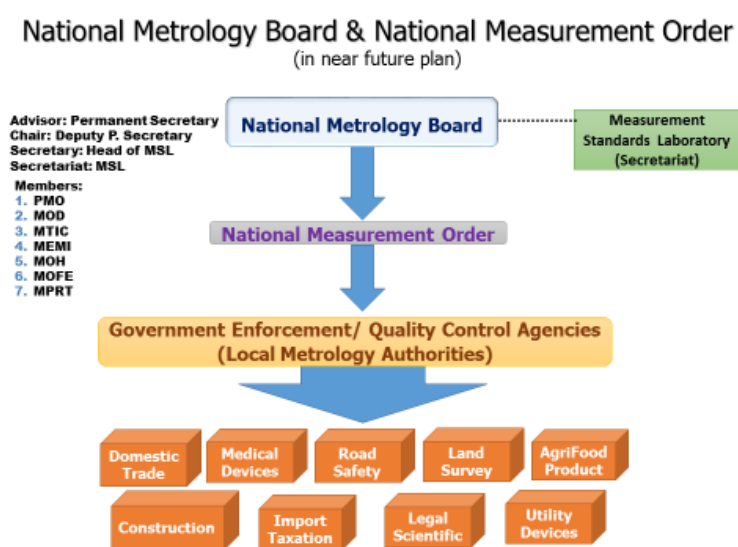


Figure 21: Proposed National Metrology Board

Metrology Authority.

Currently Brunei Darussalam is doing study on the establishment of One Stop Metrology Authority both for legal and scientific metrology. The purpose is to centralise all metrology activities both in legal and scientific metrology in Brunei Darussalam. Hence, it is easier to coordinate all the metrological support for industries, enforcement, export trade, environment & health policies, foreign direct investment and social development in Brunei Darussalam. This consolidation will create a better utilisation of manpower and metrological capability to strengthen the National Quality Infrastructure.

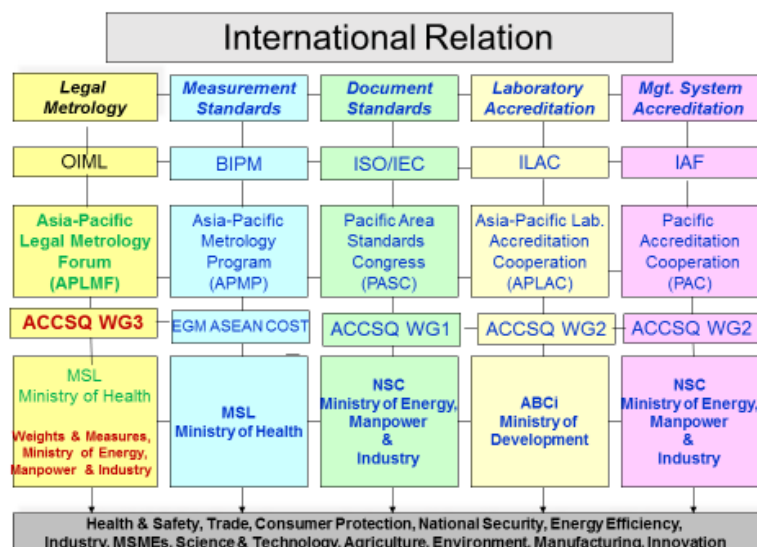


Figure 22: Organisation Involved in Standards, Quality and Metrology.

Enforcement Metrological Traceability.

Providing metrological traceability for the enforcement activities in Brunei Darussalam is one of the responsibility of Measurement Standards Laboratory. The purpose is to enhance the quality of the enforcement services and to safeguard the national interest. At the moment MSL is on the progress in developing the traceability for these activities mentioned below:

1. Verification of weights & measures instrument used for domestic trade.
2. Medical Device used in the hospital and clinic for Blood Pressure Device, Autoclave and Clinical Thermometer.
3. Forensic Government Agencies that compliance to ISO/IEC 17025 such as Forensic Biology & DNA, Physical Evidence, Toxicology and Illicit Drugs.

Emerging issues – challenges and opportunities

Brunei Darussalam through the Measurement Standards Laboratory is continuously working together with various agencies in developing the Brunei Darussalam Metrology Infrastructure which will be align with the National Quality Infrastructure in Brunei Darussalam. The main purpose of these establishment is to harmonise all metrology activities both scientific and legal metrology in order to support the industries, enforcement, export trade, environment & health policies, foreign direct investment and social development, in Brunei Darussalam. Through active participation for Measurement Standards Laboratory in APMP, APLMF, ASEAN such workshop, training, inter laboratory comparison and knowledge sharing will ensure Brunei Darussalam in fulfilling the international practices.