

# **PROPOSAL FOR NOMINATION FOR OIML 2020 AWARD FOR EXCELLENT ACHIEVEMENT IN LEGAL METROLOGY IN DEVELOPING COUNTRIES**

Joint Candidates Representing Indonesia

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# SECTION 1

## BACKGROUND INFORMATION

### 1.1. Introduction

Legal metrology in Indonesia is performed under Legal Metrology Act No. 2, 1981. Based on this Act, the Government issues technical regulations under Ministerial Decree specifying the legal units, pattern/type approval, verification, pre-packaged products, the sanction and the surveillance of measuring instruments. Directorate of Metrology is a government organization under Directorate General of Consumer Protection and Trade Compliance, Ministry of Trade, Indonesia which creates and communicates regulation and policies, giving communities the opportunity to get better protection and assurance of their right to fair trade. These responsibilities are at the heart of Directorate of Metrology as the national legal metrology authority.

Since the enforcement of New Revision of Autonomy Law in 2014, the regional verification offices are under the administration of District Government (regency/city level) and DKI Jakarta Government. The changing of the administration structure has impacted the legal metrological structure such that Indonesia needs to establish 509 verification offices at multiple regional/city levels. There are currently 322 verification offices (or 63 per cent of target) throughout Indonesia which are responsible for the verification, reverification of measuring instruments subject to legal control, surveillance, diffusing of legal metrology activities and education of people concerning legal metrology in order to enhance the awareness of the importance of measurements in their daily life. However, the change provides a positive energy for legal metrology activities in Indonesia such as:

- providing direct access from business to legal metrology service providers, since they have face to face contact as they are available in all geographical locations – Indonesia is an archipelago country so this is a big challenge;
- reducing cost (e.g. transportation) for business; and
- more sources of contact from central government to perform legal metrology activities.

There are 1,436 verification officers working across Indonesia. The scope of the legal metrological services is, mainly, the measuring instruments used for trade, related to public service, good expedition purpose, labor wages determination, determining the quality and quantity of final product, and other practices subject to national regulations.

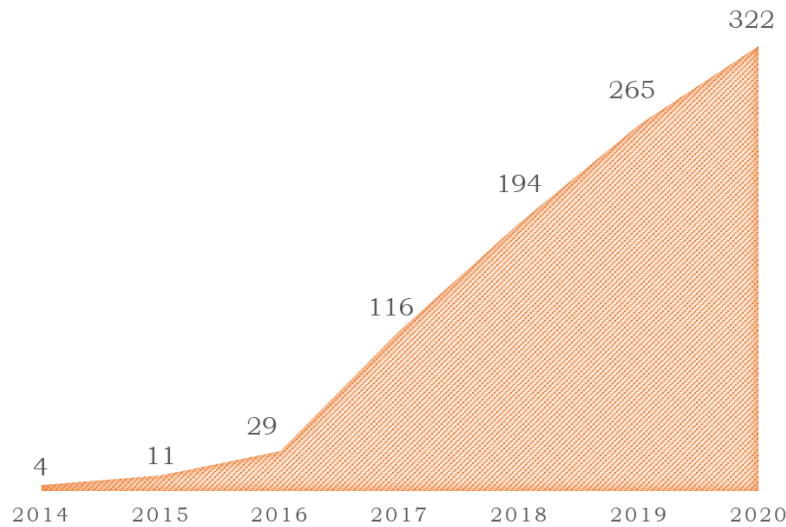


Figure 1: The progress of the establishment of legal metrology offices during 2014 - 2020

Therefore, due to the fact that Indonesia as an archipelago country with a population of 225 million, Indonesia through Directorate of Metrology is challenged to transform their operation from a traditional legal metrology approach which is focused on the ability to provide a service (e.g. verification and inspection) to ensure fair trade in measurement, into a community approach which is promoting smart behaviour to and for consumers and protecting consumers from deceptive and fraudulent practice. The community approach put consumers at the center of decisions, while the traditional approach focuses on technical solutions, which maybe more difficult to achieve because of the long time span and the relatively high cost, especially for developing countries.

## 1.2. Concept of Nomination

Indonesia would like to propose our new approach to legal metrology promotion for the OIML Award in which the collaborative work between legal metrology authorities and their communities focuses on increasing awareness of legal metrology. The concept of “Legal metrology beyond technology: a new approach to increasing public awareness” is underpinned by the belief that there are many ways, to shape legal metrology to achieve the broad mission of providing better consumer protection at the national level. Traditional legal metrology authorities rely on their service activities as a base of their legal metrological control. Consequently, they focus on development of labs/offices and raising numbers of human resources (e.g. verification officers), simultaneously. Those strategies also tend to require technology-based solution to meet the objective of their performance. High cost and extra timespan are some other problematic issues following this approach. Therefore, legal metrology management including planning and controlling metrological activities needs a shifting approach.

In the 2020-2024 workplan, Directorate of Metrology focuses on achieving excellence in ongoing building awareness on metrology as a goal at the national level. But it is equally focused on engaging with others within the nation and also within the region (perhaps the world), on the education and awareness campaign and also on the positive impact of legal metrological control linked to metrological risk prevention/mitigation initiative. The workplan highlights the transformation into the future delivering better consumer protection in the measurement and fair-trade environment. Here, it put the framework of legal metrological services in Indonesia to be beyond technology from action, from collaboration with stakeholders to projects that develop communities in the field of metrology and legal metrology. Just as we educate communities to be active and smart consumers. Such an approach is developed in such a way by following actions, such as:

- 1) Building networks and engagement with institutions and organizations that are focused on sustainability in consumer protection and fair trade; including local governments, non-government organizations and international/regional and national bodies of metrology and legal metrology;
- 2) Promoting legal metrology activities by focusing on building national branding of legal metrology; and
- 3) Delivering a set of complex and interesting challenges for the consumer protection sector with five strategic themes: “Always measured”, “Legal metrology improving consumer protection”, “Valuing our people”, “Everyone can measure”, and “Working with others”.

## SECTION 2

### SUPPORTING INFORMATION ACTIVITIES

#### 2.1. Certified Measurers and Community engagement

##### A. Activation of Certified Measurers

Certified measurers are persons working at traditional markets who have been given a task from local government to identify and inspect on a regular basis all measuring instruments used for trade in the traditional market where they are placed. Certified measurers are enrolled after they meet the qualification of basic competence in handling Non-Automatic Weighing Instruments (NAWI). NAWI is the most used measuring instrument for trade in traditional markets. They are given a formal training program which involves both theoretical aspect of NAWI and practical activities on checking NAWI at basic level.



Figure 2: The first batch of certified measurers for traditional markets (top) and on-job training of certified measurers.

In some regions in Indonesia, local governments name certified measurers with a local name. For example, in West Java, certified measurers are called as “KANG UJANG – tuKANG UJi timBANGAn (Weighing Instrument Tester)”, in North Sumatera, they are called as “BANG UCOK – timBANG Uji coCOK (Weigh-Test-Done)”, and in Central Java, they are called as “MAS BAMBANG – MASTikan timBANGan tanpa bimBANG (be sure scale used with no doubt)”. There are currently 218 certified

measurers since it was officially launched in March 2019. However, the growth of certified measurer is continuing as this program has been beneficial for both local government and traditional market management. Some modern markets such as supermarkets, hypermarkets, shopping centers are also interested. The certified measurers are recognized as an internal control to ensuring that measuring instruments used for trade within markets meet the regulations. The certified measurers can assist consumers to take a follow up action on their compliance.



Figure 3: Character of “Kang Ujang – the certified measurer”

The creation of certified measurers is a collaborative activity between legal metrology institutions and community (e.g. traditional market management) that will provide attractive activities, insight and tools for collaboration which will identify opportunities for partnerships aligned to meeting community and consumer needs, and insure the community is included in developing pathways which deliver impact. This is also an exciting opportunity for metrology practitioners across legal metrology institutions to show their development and build a collective vision on how legal metrology authorities can best collaborate with their community to create value for better metrological practice and to reach the purpose of ensuring measuring instruments used for trade are providing consumer protection.

## B. Activation of Legal Metrology Community

Legal metrology community is a group of individuals who are aware of weights and measures and promote the importance of legal metrology through their daily activities. Many communities have been established such as Bike Community with their tagline “where a distance is well-measured”, a group of coffee lovers with tagline “metrology in a cup of coffee”, a music band with “a sound of metrology”, Women Community with their tagline “Smart Shopping with metrology”, and many more.

The objective of promoting legal metrology through community is to open the community’s mind that legal metrology is everywhere and involved with their daily activities. By increasing awareness of weights and measures, they will be protected from deceptive and fraudulent practices in measurement. Directorate of Metrology also expects the community to see legal metrology in a simple way such that they can have a better understanding and further become a part of legal metrological control.



Friends of metrology is a campaign to value not only legal metrology officers (e.g verification officers, inspectors) but also individual or community who are contributing to legal metrology activities.



Figure 4: Characters of Friends of Metrology

### C. Metrological Award for Local Government

The Metrological award is an appreciation from the Ministry of Trade to local governments who have an excellent performance in conducting legal metrology services. There are some variables used as criterion for assessment. The program has been running since 2010 and has awarded 1438 traditional markets and 41 regencies/cities.



Figure 5: Metrological award for local government in 2018 awarded by Minister of Trade of the Republic of Indonesia

This award for local government is, of course, not only about appreciation for those who care and support the legal metrological control system running at the local level, but also it seeks to be about educating the community and adding value for legal metrological services within communities. At the core of this concept is a desire to make the metrological award into a process for promoting legal metrology to community, people and region, local and national. Promotion of metrology especially legal metrology is an attempt to inform, persuade, or remind communities about metrology issues. The goal is to stimulate actions from people or communities. In our case, the desired action is for the people and communities to know, to be aware of the metrology issues especially in legal metrology where measurement is used constantly in their daily activities. Local government plays a vital role in building collaboration within their networks to ensure all measuring instruments used for trade at their premise meet national regulations.

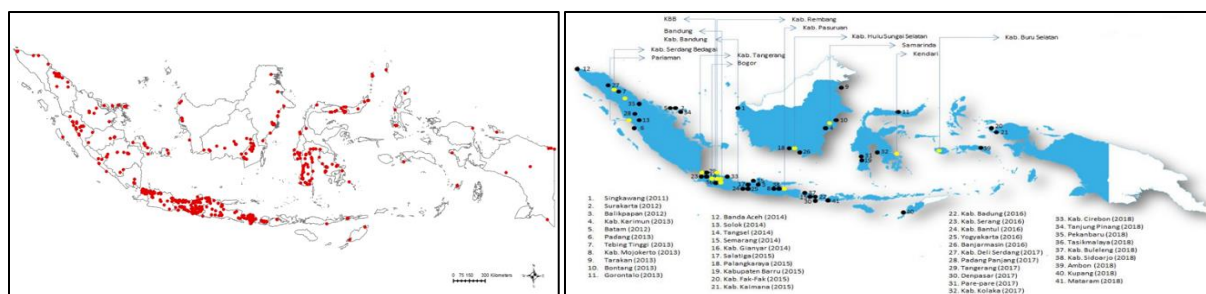


Figure 6: Map of distribution of traditional markets (right) and regencies/cities (left) awarded metrological award throughout 2010 – 2019 across Indonesia region.

An Award for traditional market management who demonstrate that all measuring instruments used for trade within the market have met national regulations, is a part of metrological award for local government. The award for the market is an initial step for local government before jumping into the metrological award at regional/city level. Today, as mentioned before, there are 1438 traditional market across Indonesia region. A unique feature of each market is the availability of the re-checker-weighing scale inside the awarded market. This scale is used for consumers to re-check their goods to confirm whether it has a correct quantity or not. The re-checker is also designed as a tool to control the NAWIs used within the market as it is a certified measuring instrument. To optimize the management of the re-checker-weighing scale at traditional markets, the Directorate of Metrology in collaboration with the traditional market's management creates the certified measurers.

## 2.2. Establishment of the Laboratory of Creativity

To support the activities of promoting legal metrology to community and stakeholders, the Directorate of Metrology has established a Laboratory of Creativity. This is the first laboratory in Legal Metrology which is dealing not with testing measuring instruments or prepackaged products, but for producing and broadcasting creative content regarding legal metrology. People can easily see the materials from technical issues to general issues on legal metrology.

During COVID-19 outbreak, the Directorate of Metrology through the Laboratory of Creativity has produced many materials for training and education and conducted many webinar and podcast activities through various social media platforms such as Metrologi, YouTube Channel, Direktorat Metrologi Podcast, Facebook, Instagram, and others.

In Metrology YouTube Channel (ME YOU Channel), there are many videos for verification officers, inspectors, and certified measurers, as follows:

1. Videos on how to repair NAWI
2. Videos on how to check NAWI in practice
3. Videos about metrology
4. Videos about the activities of the Directorate of Metrology

The events that have been conducted are as follows:

1. Talk show about metrology in a cup of coffee (2019) to commemorate World Coffee Day
2. Webinar on Metrology, Trade, and COVID-19 (May 2020) to commemorate World Metrology Day
3. Webinar on How to involve market management in repairing weighing instruments (May 2020)



4. Webinar on a Strategy to promote legal metrology in social media (May 2020)
5. Webinar on Legal Metrology and New Normal (June 2020)

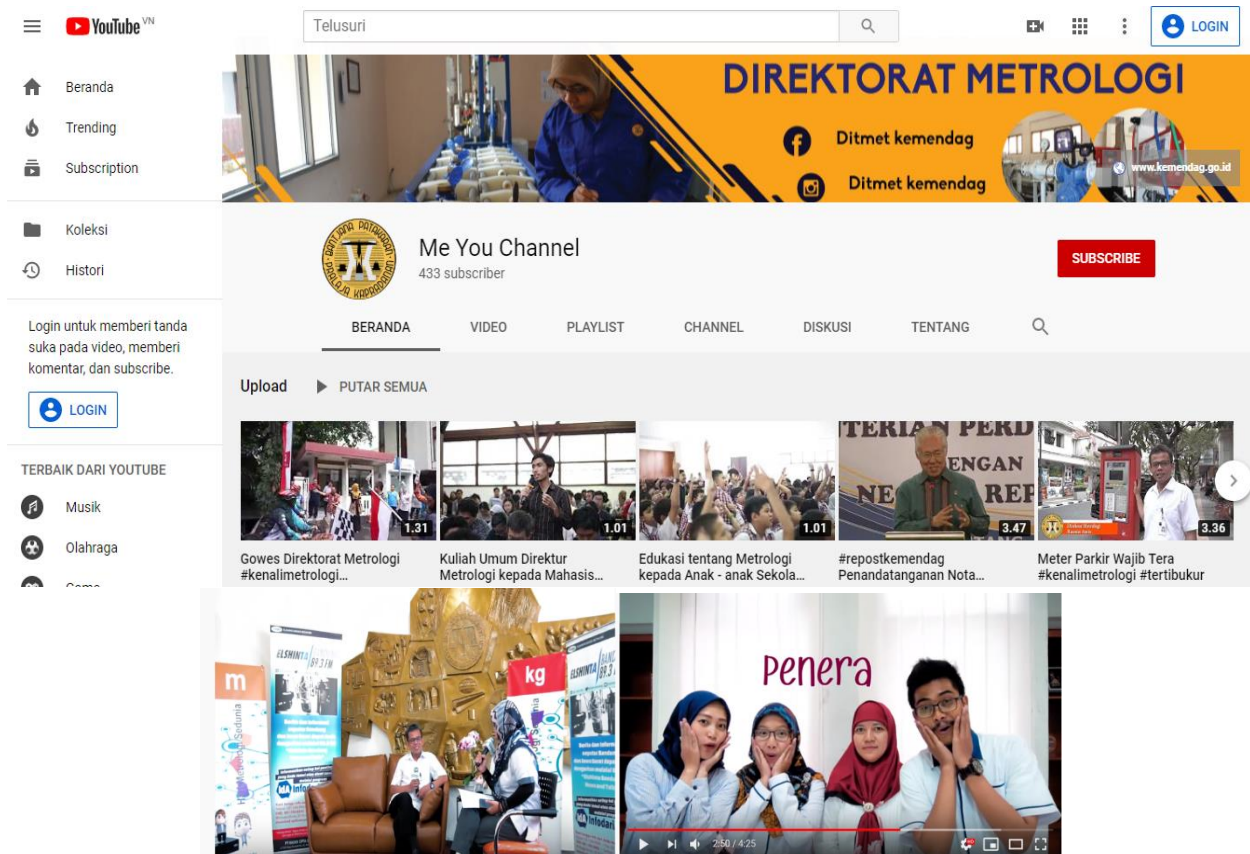


Figure 7: Promotion of Legal Metrology from Social Media



Figure 8: Promotion of Legal Metrology to school



Figure 9: Talk Show about metrology in a cup of coffee



Figure 10: Working on Laboratory of Creativity (left); Live streaming of course on calibration for mass standard (right)



Figure 11: Live Talk Show Directorate of Metrology and Legal Metrology Office



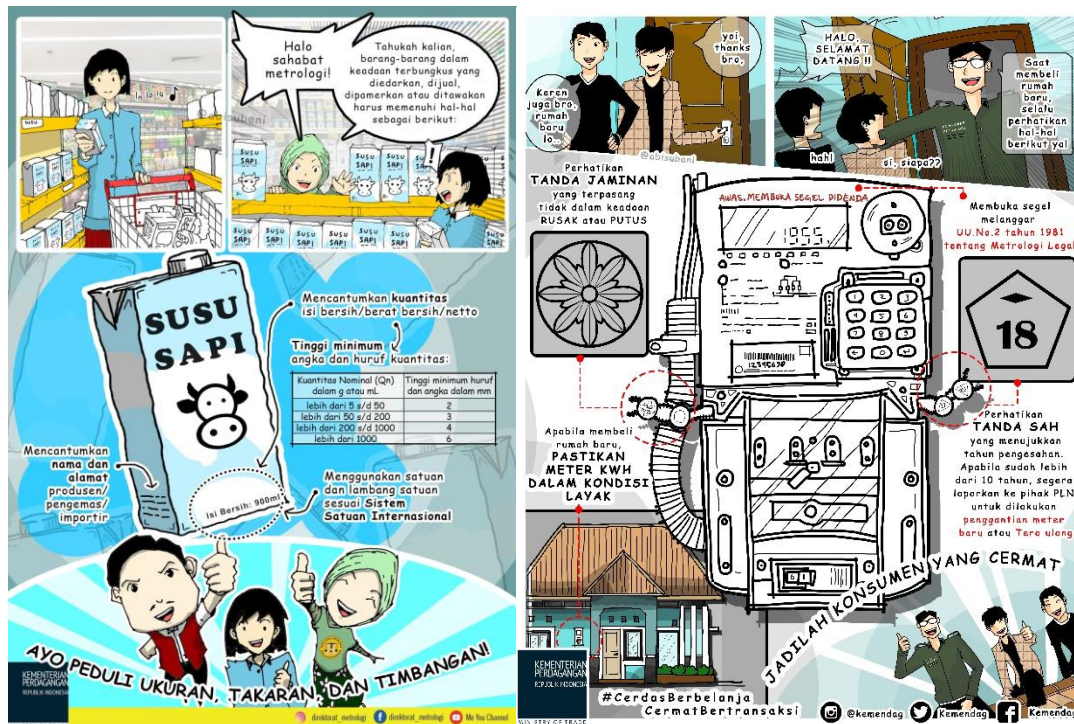


Figure 12: Example of promotion of legal metrology through comic

As a result of our activities, the study for Research and Development Unit of Ministry of Trade shows that, consumers in traditional markets and modern markets (e.g. supermarket, hypermarket, etc. now have an awareness index of 57.1. This means that consumers have reached a high level of understanding about their rights when conducting transactions using measuring instruments. This index is developed by the Directorate of Indonesia to measure the level of the understanding and awareness of consumers with respect to legal metrology.

### 2.3. Development for OIML Certification System Implementation

Indonesia is developing an infrastructure to meet the requirement to implement OIML Certification System as an Issuing Authority. The priority fields are NAWI (OIML R76), Gas Meter (OIML R137), and Fuel Dispenser (OIML R117). 90% of this work on this project is completed and will be finalized by 2022.

Some laboratories are designed with the concept of “Integration of laboratory and display window” such that people can see the activities in the laboratory. At the end of 2020, the Directorate of Metrology will launch the laboratory weekend tour for the public. Therefore, the community can learn more about legal metrology activities and infrastructure such as verification, type approval and others.



Figure 13: Testing laboratory for NAWI



Figure 14: Testing laboratory for Gas Meter



Figure 15: Testing laboratory for Fuel Dispenser



Figure 16: Testing laboratory for Moisture Meter

## 2.4. International Cooperation

Indonesia through the Directorate of Metrology has active participation in regional and international fora as follows:

1. CIML Member
2. Executive committee member of Asia Pacific Legal Metrology Forum (APLMF)
3. Chair of Working Group of Good Packed by Measure APLMF
4. Member of Working Group of Metrological Control System APLMF
5. Member of Working Group of Quality Measurement of Agricultural Products APLMF
6. Member of ASEAN Consultative Committee for Standards and Quality (ACCSQ)
7. Chair of Working Group on Legal Metrology (WG3 on Legal Metrology)

In the last 5 years, Indonesia in collaboration with APLMF Secretariat under MEDEA project has hosted training courses such as:

1. Mass Standards on 30 August – 1 September 2016
2. Pre-packaged Goods on 18 – 21 May 2015

Indonesia also has been appointed for focal point in developing regional documents such as:

1. ASEAN Guideline for NAWI
2. Identification pre-packaged products for the implementation ASEAN Common Requirement for Prepackaged Products
3. ASEAN document for raising awareness in legal metrology
4. APLMF e-module for Average Quantity System

Indonesia has also been active in supporting other developing country in developing legal metrology infrastructure. Cooperation between Indonesia and Timor Leste under South-South Cooperation is one of successful effort from Indonesia to assist Timor Leste in developing the metrological infrastructure throughout capacity building. Many activities have been completed as follows:

1. Assistance of metrological regulation preparation in 2017 in Dili, Timor Leste
2. Technical Assistance on Verification of Fuel Dispenser in 2018 in Dili, Timor Leste
3. Technical Assistance on Verification of NAWI including Weighbridges in 2018 in Dili, Timor Leste
4. Metrology Seminar in 2018 in Dili, Timor Leste
5. Technical Assistance on Prepackaged Goods in 2019 in Dili, Timor Leste
6. Technical Assistance on Inspection of Measuring Instruments 2019 in Dili, Timor Leste
7. Technical Assistance on Laboratory Management in 2019 in Bandung Indonesia







Figure 17: Technical Assistance for Developing Legal Metrology Infrastructure in Dili, Timor Leste



## SECTION 3

### CONCLUSION

This proposal has presented the activities of Indonesia through the Directorate of Metrology. The main activities have been carried out in collaboration between government, business, and the community ensuring legal metrological control is performed in harmony.

The OIML Award 2020 for developing countries is highly recommended and timely for Indonesia considering the following:

1. There is collaboration between government, business, and the community to create fairness for consumers and to protect both business and consumers from deceptive and fraudulent practices in legal metrology.
2. The new approach has been effective in promoting the importance of legal metrology not only for the community and business, but also to decision or policy makers such that the problems facing legal metrology offices (e.g. budgeting, human resources, etc.) are gradually getting solved. For instance, National Planning Bureau have allocated about 35 million USD for the development of the legal metrology infrastructures at city level and also have allocated about 4,700 slot for new verification officers.
3. There have been many improvements that have been delivered not only to the community but also to stakeholders as a result of their participation in the establishment of the legal metrology service and the increased awareness of weights and measures and it's role in delivering fair measurement to consumers and reducing fraud. For instance, the growth of the establishment of legal metrology offices at city level increases annually with about 100 offices per year because the local governments and local parliament are more aware about the important of legal metrology. On the other hand, the number of traditional market with have a predicate of fair measurement also increases from only 30-40 traditional market in period of 2011 to 2013, into 100-200 markets per year. Here, the improvement of participation of stakeholders as their awareness of weight and measure.
4. The collaboration between government, business, and the community has been effective in promoting and improving the legal metrology infrastructure in Indonesia especially for local government who are new to legal metrology information.
5. Winning the OIML Award will be a significant milestone for Indonesia especially for local government as this will further provide the strong motivation to perform better legal metrology service for their community.