23rd Asia-Pacific Legal Metrology Forum and Working Group Meetings

Minutes

23-25 November 2016

Held at Bio-IT Research Building of National Institute of Advanced Industrial Science and Technology (AIST), Tokyo Waterfront
23rd Asia-Pacific
Legal Metrology
Forum and Working
Group Meetings

Hosted by National Metrology Institute of Japan (NMIJ) and Ministry of Economy, Trade and Industry (METI), the 23rd APLMF and Working Group meetings were held from 23 November through 25 November 2016 at Bio-IT Research Building of AIST, Tokyo Waterfront.

The meetings were attended by delegates from full member economies and representatives of the international and regional organisations.

23-25 November 2016
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<td>Mr Shin HOSAKA</td>
<td>Ministry of Economy, Trade and Industry (METI) Deputy Director General, Industrial Science and Technology Policy and Environment Bureau</td>
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<td>Japan</td>
<td>Dr Yukinobu MIKI</td>
<td>National Metrology Institute of Japan (NMIJ), AIST Director</td>
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### Secretariat

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<td>President</td>
<td>Mr Stephen O'BRIEN</td>
<td>APLMF Secretariat President</td>
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<tr>
<td>Senior Administrator</td>
<td>Ms Alli SMITH</td>
<td>APLMF Secretariat Senior Administrator</td>
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## Full Member Economies

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<td>Australia</td>
<td>Mr Anthony DONELLAN</td>
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<td>Cambodia</td>
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<td>Cambodia</td>
<td>Mr KHLAUT Ousa</td>
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<td>Canada</td>
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China  Mr Du Yuejun  AQSIQ  Deputy DG

China  Mr GUO Su  AQSIQ  Chair – WG Metrological Control Systems  APLMF WG Chair

China  Ms LI Mengwan  AQSIQ  Official

China  Mr ZHANG Xiaogang  AQSIQ  Deputy Director

Indonesia  Mr Eko Agus IRIANTO  Directorate of Metrology  Deputy Director of Metrological Analysis

Indonesia  Mr Hari PRAWOKO  Directorate of Metrology  APLMF Executive Committee  Director
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<td>Republic of Korea</td>
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<td>Korea Agency for Technology and Standards</td>
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<td>Malaysia</td>
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Ministry of Business, Innovation and Employment  
Chair – Goods Packed by Measure  
Legal Metrology Advisor

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Philippines  
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Senior Science Research Specialist

Singapore  
Mr Andrew **YAP**  
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Senior Manager, Consumer Protection Weights & Measures
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<td>Ms Suh-Chyin CHUANG</td>
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<td>Chinese Taipei</td>
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<td>Technical Specialist</td>
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<td>Thailand</td>
<td>Mr Sakchai HASAMIN</td>
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<td>Thailand</td>
<td>Mr Jarin SUTTANARAK</td>
<td>Bureau of Weights and Measures Department of Internal Trade, Ministry of Commerce Director of Bureau of Weights and Measures</td>
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<tr>
<td>United States</td>
<td>Mr Ralph RICHTER</td>
<td>National Institute of Standards and Technology (NIST) Senior Engineer</td>
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<td>Viet Nam</td>
<td>Mr NGUYEN Hung Diep</td>
<td>Director of Bureau of Weights and Measures Director</td>
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<td>Viet Nam</td>
<td>Mr Tran Khac Dien</td>
<td>Vietnam Metrology Institute (VMI) Deputy Director</td>
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<tr>
<td>Viet Nam</td>
<td>Dr VU Khanh Xuan</td>
<td>Vietnam Metrology Institute Director</td>
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**Corresponding Members**

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<td>Russia</td>
<td>Prof Lev K ISSAEV</td>
<td>VNIIMS Chief Science Research Specialist</td>
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<td>Russia</td>
<td>Dr Alexander Kuzin</td>
<td>VNIIMS Director</td>
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<tr>
<td>Honorary Member</td>
<td>Mr John BIRCH</td>
<td>APLMF President 1994-2001 Consultant</td>
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<td>Honorary Guest</td>
<td>Dr Akira OOIWA</td>
<td>National Metrology Institute of Japan (NMIJ), AIST APLMF President 2002-2007 Past President of APLMF, Guest Scientist of NMIJ</td>
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<tr>
<td>Guest</td>
<td>Mr Stephen PATORAY</td>
<td>BIML Director Director</td>
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<td>Guest</td>
<td>Mr Uwe MIESNER</td>
<td>WG Head Asia Physikalisch-Technische Bundesanstalt (PTB) Head, Technical Cooperation in Asia</td>
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<tr>
<td>Observer</td>
<td>Mr Nikhilest JHA</td>
<td>Additional Secretary &amp; Financial Advisor India</td>
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<tr>
<td>Observer</td>
<td>Mr Ashutosh AGARWAL</td>
<td>Assistant Director, Legal Metrology India</td>
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Welcome to working group meeting

8am – 5pm, Wednesday, 23 November 2016

Stephen O’Brien, APLMF President welcomed the forum members.

He noted it was his very great pleasure to welcome participants to the Working Group meeting of the 23rd Asia-Pacific Legal Metrology Forum meeting in Tokyo, Japan.

He recognised the fact that many have travelled great distances to be here and he thanked all for their efforts and encouraged active participation. He looked forward to what would be an interesting and productive Working Group meeting.

On behalf of APLMF he passed on our appreciation to National Measurement Institute of Japan for its willingness to host these meetings and for the hard work and dedication that Dr Tsuyoshi MATSUMOTO and his team from NMIJ have put in to prepare for and support this meeting’s success. He looked forward to working with Yoshi and his team over the coming days.

As new to APLMF Presidency he was pleased to have the benefit of the knowledge and wisdom of 2 past APLMF Presidents attending.

He welcomed and acknowledged Honorary members: Mr John BIRCH and Dr Akira OOIWA and thanked them for their attendance and ongoing valuable support of APLMF. He also noted an apology from Mr PU Chengchang, he would have like to have attended. Mr DU Yuejun is representing Mr PU at the Forum.

He noted we were also fortunate to have several other honoured guests and welcomed them also:

Mr DU Yuejun, Deputy Director General, AQSIQ (China) representing Immediate Past President of APLMF

Mr Stephen PATORAY the BIML Director of the International Organisation of Legal Metrology

Dr Toshiyuki TAKATSUJI, the Chairman of the Asia Pacific Metrology Program (APMP)

Mr Uwe MIESNER, the Working Group Head of Asia, PTB Germany

He also introduced APLMF Secretariat Team assisting at this meeting:

Ms Alli SMITH – Senior Administrator

Mr Kevin GUDMUNDSSON – NZ Economy representative, Pre-Packaged Goods WG Chair and also supporting the Secretariat.

Mr Stephen O’BRIEN noted we are new a Secretariat and this is our first meeting. He encouraged attendees to feel free to approach us with any questions or comments you may have as we are keen to learn and support you in any way we can.

He noted we have a large group of delegates representing member and corresponding member economies here today and he welcomed all and noted the return of old friends and colleagues from the Russian Federation. It has been a while since they have attended an APLMF meeting and it is great to see them here.

At this meeting he also welcomed observing delegates representing India: Mr Nikhilest JHA and Mr Ashutosh AGARWAL.

He then noted we have a number of new people here today and asked each attendee to introduce themselves with their name, agency and economy.

He noted it was clear we have the right people, we have the right venue and we have the right support in place for an interesting and productive Working Group meeting.
Introductions

All attendees, introduced themselves and their organisations.

2.1 New Guidelines and Operational Processes - Changes proposed

Mr Stephen O’BRIEN presented the following key points from the proposal:

- Need to focus resources;
- Be highly selective about activities;
- Working Group require a Convenor (Chair) and minimum of three active members – if we don’t have that quorum, we need to look at disestablishing a working group as it can’t operate with less than this;
- Membership of a Working Group is a way of building knowledge and experience so needs rotation and transition across member economies;
- Right composition of skills within the group
- Operate effectively – utilise teleconferencing and email discussions to progress work program
- Members of the WG work collaboratively, undertaking tasks agreed in their annual work plan, assist Chair in preparing annual report.
- Encourage active collaboration on issues with members
- Produce WG reports 6 weeks before annual forum meeting
- Update Secretariat on achievements to be included in APLMF newsletters
- Take into account ongoing work of OIML and SRB’s
- All key documents being used by working groups, need to be copied to Secretariat, so they can be uploaded to a working group only area.
- Secretariat to provide a set of protocols on what is required to be part of a working group
- Terms of Reference – clearly defined TOR to frame the tasks undertaken by the group
- Terms of Reference are regularly reviewed the working group and reconfirmed by the Forum – in the coming year, each working group will review their ToR and update the Forum of any modifications.
- Working Groups are set up to take on a series of specific tasks or projects which are limited to time.
- Disestablish the Working Group for Training Coordination and create a role within the Secretariat to carry out the responsibilities of training coordination. The individual will be from within member economies. The Coordinator will change every 3 years.
- Needs assessments will be carried out with members every 2 years to determine key activities which need to be done and where it is appropriate set up working groups to carry out tasks/projects

http://www.aplmf.org/uploads/5/7/4/7/57472539/aplmf_working_groups_-_procedures_draft.pdf

2.2 Summary of workshop discussions

The attendees split into 4 groups. Each group was asked to appoint a scribe to record key points on the boards provided and appoint a spokesperson to report back. Below is a summary of feedback to each question.

Discuss the proposed Working Group New Guidelines and Operational Processes:

- working groups need reviewing and the proposed guidelines are a positive step,
- agree current working groups should be re-evaluated to determine if still relevant
- more engagement from all member economies is needed,
• specific project based work does not require a working group,
• agree that training coordination should not be a working group, rather a role within the Secretariat
• need more work to inform members how to become involved in working groups
• Establish APLMF representation on OIML TC WG to avoid duplication
• Funding base – how they are going to work, where that funding should come from? Is it the WG Chair to source some of that funding? For consistency this should be within the remit of the APLMF Secretariat.

How to promote involvement of members to these groups

• WG Chair could promote member involvement and establish a deputy chair to share workload
• WG Chair should actively approach economies to participate, general consensus from one group was they would be open and receptive to participating in working groups if approached directly.
• Membership of WG could be nomination based on expertise or experience and acceptance should be voluntary
• All economies should be required to be actively involved in at least one working group
• Member economies should chose relevant working groups to be involved in
• More regular updates from working groups on developments and progress on projects would increase visibility of working groups and encourage active engagement/membership
• Identify individuals with expertise from training courses, who could be approached to join a specific working group
• Important to have continuity of members, building rapport within a working group, building the knowledge base to complete the task or project

Suggest projects for current working groups

• Circulate a needs survey for current and future working groups to provide the basis of the review of working groups to understand what they want from working groups. The survey should be open to all metrology organisations within member economies.*
• Avoid duplication with OIML TCSC working groups – APLMF Working Groups should complement not duplicate. Member states need to act more objectively, transcending their national and sovereignty interests and representing APLMF as a regional grouping
• Create consistency of compliance post market surveillance strategies by establishing guidance material to assist harmonisation and reducing compliance burden and cost to a businesses to open up trade
• Quality of water and review of metrology laws – unsure whether these topics are already being discussed with existing working groups

*Comment from Mr John BIRCH on needs surveys - How do we make the activities relevant to the organisation so it is important that you want to be involved. Two aspects 1. What your organisation needs and is doing... but 2 more importantly how your organisation is interacting with the economy it’s in. There are many issues in the economy which are quite often not dealt with by the legal metrology organisation even though they should be. So if you do a needs survey, doesn’t matter what the organisation is, you will get the same answer, training is the main need. Certainly training is important, but doesn’t really tell you very much about the role of measurement in the economy and there are major issues in the economies at present which we rarely discuss at this table e.g. climate change, road safety and fatalities and air pollution. So it is a case of, to what extent we can encourage people to look out in their economy and look at how metrology is being done or not being done and to what extent they can contribute to making the economy a much more effective, social and economic activity.

Suggest possible future project work:

• RLMO should have joint representation in the current OIML TC activities e.g. R139 TC on hydrogen, *
• Verification of software,
• Closer working relationship with APMP at working group level
• Establish a working group to focus on developing guides for the verification of software and quality of water in relation to metrology loss,
• Encourage members to look at what is and what isn’t happening in terms of legal metrology within their economies which aren’t being managed through legal metrology but could and should be and feedback to the Forum issues which should be considered for discussion or working group activities.
• OIML single certifications scheme – Current WGs Metrological controls and MAA - should focus their activities on awareness raising and knowledge transfer of the OIML single certification scheme. APLMF has a key role to cascade and promulgate initiatives at the international level from OIML and down through regional levels

*Comment: Can APLMF as a Regional Specialist Body make joint contributions and representations to OIML TCSC’s. This was a question a number in Group 2 contributed to. Clearly what that would require is two things. 1. Member states to act more objectively, transcending their national interest and sovereign interest and representing APLMF as a regional grouping and 2. It would change the dynamics within this Forum to try and drive some consistency and to bring that harmonisation across a number of regions.

3 MEDEA Update

3.1 MEDEA Updates

Mr Uwe MIESNER presented an update on MEDEA activities.
• He noted Dr Kristin KIESOW had recently resigned and PTB was in the process of appointing a new Project Coordinator, to be announced in January.
• MEDEA’s objective is to improve the ability of regional metrology specialist networks in Asia (APMP and APLMF) to promote the metrological systems of developing economies. MEDEA’s work packages are funded by the Ministry for Economic Cooperation & Development (Germany). The current project funding is 2014-2017.
• Looking at a second phase, with a significantly smaller budget, hopefully another 4 year project, 2018 - 2021 to continue the cooperation partnership. PTB will be going through a rigorous review process to secure funding for phase two over the first half of 2017, so hope to be able to announce phase 2 towards the end of 2017.
• It is important there is a strategy to sustain activities and benefits achieved after the MEDEA project finishes.
• Mr MIESNER in closing thanked the MEDEA Coordination Committee for driving the project and APLMF Secretariat for facilitating the activities and to all partnering and contributing economies and institutes for helping to drive the project and realise the range of activities.
• For more information about MEDEA’s approach, activities, structure, coordination and outlook

Comment: Mr Stephen O’BRIEN thanked Mr MIESNER. He noted from APLMF’s perspective, this project has had real benefits for economies within the Asia-Pacific Region and we are very appreciative of the administrative work done by PTB and the financial sponsorship of the German Government for this programme. We hope that the 2nd phase is approved. He also noted that another key benefit to come out of this project is the closer working relationship between APLMF and APMP bringing both scientific and legal metrology together which will have a lasting effect.

Comment: Australia Mrs Marian HAIRE noted it was appropriate as a group to convey our thanks to Dr Kristin KIESOW for her leadership of the Coordination Committee and as you can see from the output we achieved a lot under her direction.
Comment: Stephen O’BRIEN agreed and noted that all three of the PTB staff, Anna Cypionka, Kristin Kiesow and Stefanie Scheschinski need to be considered for recognition by APLMF for their work on the MEDEA project.

Question: China Mr GUO Su asked whether there will be an opportunity to input ideas for the 2nd phase or will be follow the current work package.

Answer: Mr Uwe MIESNER advised the current plan will be implemented, but there will be a process for input and feedback on work packages for a 2nd phase. PTB will carry out a series of surveys and interviews by telephone and face to face which may take place at the planning workshop in May and final details will be decided at a planning workshop at the end of 2017 or beginning of 2018. The Coordination Committee will also be part of planning the next phase of work packages. So there is a transition phase which is used for both review and planning inputs, but there will be a planning workshop to define the concrete steps and work packages for the next phase.

3.2 APMP-APLMF Joint 2 – Raising Awareness of Metrology

Mr Stephen O’BRIEN provided an update on the project.

The project objective is to improve the sharing of information resources between member economies to enable them to increase the awareness of the importance of metrology with consumers, industry, other regulators and government.

The main activities are:

- to create a joint APMP/APLMF web portal to go live April 2017 – designed to scale to any device;
- to develop best practice for improving awareness of metrology – using case studies and developing methodology around what makes a successful case study;
- May 2017 – workshop to build members’ understanding of different approaches and tools to raise awareness.

Stephen, provided a walk-through of the website structure and encouraged members to look at the website and email through any feedback you have to secretariat@aplmf.org

Stephen noted he is looking for nominations for two additional people to join this project.

View presentation for more information and to see progress to date and next steps on this project http://www.aplmf.org/japan-meeting-documents.html

Comment: Russia Prof Lev K ISSAEV noted the necessity to coordinate our activities in the portal with activities of BIPM because they establish international metrology resource registry and it looks similar. For Russia Coomet are an interesting field of activity. Necessary to include in our sphere of interest to include Coomet. Currently the Secretariat of Coomet is conducted by Russia, so it is possible at the moment to establish closer cooperation between Coomet and APLMF.

Response: Mr Stephen O’BRIEN agreed and noted the portal will have links to the Regional Legal Metrology Organisations (RLMO) but there will also be links to the regional scientific metrology organisation as well. We are not going to repeat information that is available on those websites, but the portal will link to that information. So for the user, they will go through the portal and then linked to the information.

National Metrological Infrastructure – Joint Guide 1

Stephen O’Brien provided an overview of the Guide:

History of the APLMF Guide to National Infrastructure for Legal Metrology first edition developed in 2008

A useful and informative guide, but really focussed on legal metrology in Asia Pacific region, although it linked to some aspects of physical and scientific metrology this was not extensive.
Still freely available on our website.

The MEDEA project provided an opportunity to revise this document and extend its scope to the total national metrology infrastructure. This 2\textsuperscript{nd} edition has been developed it is not duplicate information that is available elsewhere e.g. OIML D1 ‘Considerations for the Law on Metrology’ rather to distil information and make it more easily available to economies.

The new Joint Guide 1 provides guidance for the development of a complete infrastructure with a focus for developing economies:

- takes into account recent international developments in both physical and scientific metrology,
- the role of metrology as part of the national quality infrastructure,
- clarifies the roles within APEC of the Specialist Regional Bodies e.g. APMP, APLAC and other accreditation and standardisation bodies etc, and
- details the critical elements for a national legal metrology infrastructure

Produced by Dr Grahame HARVEY and Dr Abdul ABDIN and extensively peer reviewed by experts from PTB, APMP and APLMF. The draft is on the APLMF website and we are working to publish the final on the website in early 2017.

Stephen thanked PTB for their administration of the MEDEA project and assistance in developing this important regional resource.


4 Working Group Reports

Please note there are links to each Working Group Reports. Presentations which are the highlights of these reports can be found on the APLMF website – 23\textsuperscript{rd} Meeting page http://www.aplmf.org/meeting-documents.html

4.1 Training Coordination Report – Mrs Marian HAIRE

Mrs Marian HAIRE, Working Group Chair, presented her report on Training Coordination for 2016:

- 3 MEDEA funded training courses delivered in 2016
- Verification of Fuel Dispensers – delivered by new generation trainers (they attended a previous course) and we expect some of these trainers will go on to lead future courses
- Manual being created by the Secretariat to assist with future organisation of courses
- Using Survey Monkey to gather and report on feedback.
- Googledocs is being used to provide access training material for all participants, making savings in time and cost to produce paper resources.
- Release of Guide 1 in May 2017 – Document explaining how the metrological infrastructure operates incorporating both scientific and legal metrology
- Awareness raising project involves developing a Asia-Pacific web portal to share best practise and case studies that show metrology activities that support economic growth and wellbeing
- To develop a guide document for each training course detailing the test procedures used and select ones to be developed into online training modules
- In order to be accepted into a MEDEA project an economy has to complete the initial survey and each individual provide actions to be completed after the training course. After six months, Secretariat follows up
on progress. This is to make people more accountable to use the knowledge they have gained back in their economy to make improvements.

- Summary of proposed - 2017 training programme
- Utility Meters – outline programme – and requested support and feedback on whether you agree on the proposed agenda for this training programme. Focus will be on the practicalities of testing water meters, the operating principals of common water meter types, typical results and expected failure modes during type approval, testing and verification and some practical demonstrations if facilities available. Question to the group... Does this seem like a reasonable agenda for this training course? The difficulty she has with the Australian trainers is NMIA will not be in a position to provide trainers. We have some industry partners we can approach, but if there is an economy in the room who feels they could provide this training course, then we would go with one of our economy rather than an industry organisation.

Comment: USA Mr Ralph RICHTER – Lots of experience with water meters, both OIML and domestically within the USA but not sure exactly what you are asking for at this point as far as the course content. Could you be more specific about what you are looking for?

Response: Mrs Marian HAIRE – What I am asking is if the course was put on tomorrow and this was the content, would it meet the needs of the developing economies. So basically, this is a course that would be delivered to support developing economies. So perhaps I could ask Malaysia to make a comment as the host and your economy will have the most people present? Quite happy to be told it is not appropriate, that’s fine, but we just need a starting point to know whether it covers what people had in their minds when they put up on the chart 2 years ago that water meters needs to be looked at.

Question/Comment: USA Mr Ralph RICHTER From memory, several years ago APLMF did have a course on water meters, the trainer was Canada (since retired) hosted in Vietnam. Would it be possible to look at the course materials from that training and to get some helpful insight as to what developing economies might needs in this area?

Response: Mrs Marian HAIRE – it would, but I thought it might be easier to ask the developing economies what their needs were. I thought it was more direct because those needs may have changed. Maybe Vietnam would have a comment? (delegate from Vietnam was not around during the delivery of the training, so was unable to comment)

Comment: Malaysia – We need to check with our colleagues in Malaysia, so will give official feedback at a later time.

Comment: Mrs Marian HAIRE noted members can send an email to the secretariat at any point in time with comments or talk to her during the programme. It is important that we know what will work you. Joe’s already indicated that he needs pattern approval level for PGN and understanding the legal frameworks that are available for water meters, which is helpful input.

- Joint APMP/APLMF 22-23 May - directors from both APLMF and APMP economies. The idea with this is to try and increase cooperation between the LMOs and the NMIs to compile case studies to demonstrate those benefits and those case studies will appear on the web portal. To get greater understanding of the challenges facing the NMIs and LMOs and to develop other ideas we have for the web portal. We are thinking that we would build it around 4 themes – role of metrology in a national quality infrastructure, legislative framework, traceability and stakeholder management. We would probably look at each of those components by having a short key-note address, some case studies, sharing of best practice and a workshop where the directors would be expected to develop concepts for the web portal and how to apply metrology to new areas in our society.
Question: Marian posed: At the planning session we have decided that it is the directors of the NMIs and LMO’s that should attend. Are we right in asking the directors or their representatives? Our reason for wanting the directors, they can drive a programme which is promoting metrology in their economy.

Proposed: The APLMF member should be invited, not the director. Because the benefit of metrology is important not only for the legal metrology field, but also the scientific metrology (small and medium enterprises) so sent the content of the workshop to the Director and share the need, combine all the information from Vietnam to the working group chair and audit the workshop content.

Comment/Question: India – Regarding the proposed workshop on the role of metrology to develop a national quality infrastructure. Quantity and Quality are exclusive; so if you include the quality aspect, the scope expands. For example taking the case of water, drinking water quality is a huge problem, many countries are not following standards and there are many license violators on water bottling. There is a huge legal framework required for that. So it would be very good if quality aspect is included in legal metrology division. But then there is a separate Health Ministry framework that is working on these quality aspects and it is not only water, it is so many other things e.g. packaged goods. Expanding the scope what will be the outcome derived out of this and whether it will be appropriate to include these aspects if it is, then it would be very good, and I would like to know the comments of APLMF.

Response: Mr Stephen O’BRIEN - he agreed looking at it from a perspective of the quality infrastructure, it does complicate the issues. But the idea of this workshop is that we are actually trying to combine legal and scientific metrology aspects. So as you suggest for example with packaged goods there is a quantity area that sits firmly in the legal metrology space but then there is also aspects of metrology in the APMP scientific metrology space. So when we pick case studies and the examples we use in the workshops, we want to make sure they can look at it from the whole perspective. So we are trying to go for that more challenging goal of getting both areas and all aspects of the quality infrastructure involved.

Comment: Philip pines noted the topics are very good and I think can also not limit access to only NMI or LMO directors because I think that it is also appropriate for office holders who have the influence to develop the NMIs and the LMO organisations for example, law makers or ministers.

Response: Marian asked how we would approach them? How would we know who in the different economies to approach? When we contact the Director we could suggest it doesn’t have to be them, it could be someone from higher office to accompany them?

Comment: Australia Mr Anthony DONNELLAN– from our perspective, I would agree with a number of the comments made around the room and I think the topics look good at this point. Looking at the context of the wider quality infrastructure, I wonder if you have considered and whether it would be useful engaging other standard setting bodies like ISO, IEC etc. in this to demonstrate the value that metrology plays for a number of other standard setting organisation. I understand that ISO has a representative in Singapore, but those types of global organisations and their regional equivalents, obviously metrology has a role to play and they sit on a number of our respective groupings. I wonder if that is being considered as an option.

Response: Marian noted that is a good suggestion, we will add that to the list.

Comment: OIML Stephen PATORAY very much agreed with the comment from Australia that the ability to understand the quality infrastructure is very important. Right now I don’t believe that everyone really understands exactly what quality infrastructure means and it is not quality of any particular item, it is the infrastructure in an organisation, the infrastructure in a national government, but also how you operation and being able to include those other entities of international standardisation; ISO, IEC, ILAC, IAF are very important in the fact that I have been
to several seminars which are trying to define that standardisation and quality are two different entities, when in reality they are the same. They are just approaching things in a different way. So you have all of these components in your infrastructure in order to implement what you are trying to do. You really can’t have a good system if you don’t have accreditation and don’t understand certification, but in the case of metrology you are trying to have a legal aspect, enforcement, and some type of approach. But without a good system in place for certification and accreditation you really don’t have a basis for what you are dealing with and very much the same with scientific approach with your traceability in particular and how you trace something if you don’t have accreditation or certification of your laboratory or your other parts. So in order to have all of this work, we have been very much promoting a very common aspect to all of this area we call metrology and it must really include certification and accreditation as a part of what you are dealing with. The DC mass is a part of this that we work with, that are part of these organisations seem a little bigger than just ISO and ILAC. So you really need to think about a full scope of what you are going to present.


4.1.1 2015 Test Procedures Survey presentation – Mr Kevin GUDMUNDSSON

Mr GUDMUNDSSON presented the 2015 Test Procedure Survey Results which covered the 5 workshops, Average Quantity System Inspection, CNG Dispensers, Fuel Dispensers, Rice Moisture Meters and Taxi Meters.

4.1.2 Online Training Proposal – Mr Kevin GUDMUNDSSON

He also talked about developing topic Guides and e-learning Modules

Action points for 2017: Develop all topics into Guides and circulate to all members of APLMF for final review and comment.

- Upload completed Guides to the APLMF website
- Develop trial online training module and establish suitability and demand.
- Online Training Proposal - Presentation


Comment: Mr Stephen O’BRIEN – One minor point of clarification, this particular project is funded by MEDEA (PTB).

Comment: Mr Stephen PATORAY noted OIML has been working with the organisation from the European Union ACPEUTBT who is developing a Moodle training module for OIML and it will be ready by the end of 2016. It might be possible that they can be tied together instead of APLMF having to spend extra money to create a training platform.

Comment: Mr Stephen O’BRIEN – we are aware that through OIML Regional Legal Metrology organisation round table we are trying to coordinate those activities so that we don’t duplicate what we are doing here and we can complement what is being done by OIML and other Regional Legal Metrology Organisations (RLMO’s).

4.2 Goods Packed by Measure – Mr Kevin GUDMUNDSSON

Mr Kevin GUDMUNDSSON, Working Group Chair, presented his report on Goods Packed by Measure for 2016:

- Package goods training material uploaded to APLMF website
- Developing test procedures for determining the density of a carbonated liquid
• Updated members that OIML R79 & R87 detailing the requirements for prepackages has been approved by OIML. OIML TC6 continues to develop a guide document outlining the system requirements for a certification system for prepackages.

Question: Honorary Member Mr John BIRCH asked if he had a study of what quantity marks have been developed in the region by either countries or SRB’s?

Response: Mr Kevin GUDMUNDSSON advised there is a study in ASEAN to determine whether a certification scheme is possible to be introduced there.

Comment: Mr John BIRCH noted he understood some countries do have quantity marks e.g. China, Japan.

Response: Mr Kevin GUDMUNDSSON - These countries with certification marks are probably the most advanced. The European E-Mark would be another one. So this guide document which TC6 is working on is to essentially put some fundamentals in place, so if any future economies want to adopt or introduce a certification system they have some general principals to follow and abide by.

Comment: OIML Mr Stephen PATORAY noted that if this in an important item for members of this regional organisation that they need to bring it forward to the OIML because this was the reason that this guide is being produced. Past conversations held that the OIML level indicated that there was not consensus for an international mark of such nature for prepackaged goods but if there is any change of heart or minds, then they need to continue to pursue that at the international level. It doesn’t seem sensible to have all these national or regional marks, which will create barriers, so an international concept might be a better way of approaching it, but it will take a lot of work to discuss, get consensus and agreement, so if it is important pursue it, but bear in mind it will take some time.

Comment: Honorary Member Mr John BIRCH agreed with what Mr PATORAY said, but to remind you of the importance of prepackaged goods at international trade, the value of the international trade in prepackaged goods is now far greater than the value of the international trade in bulk commodities.


4.3 Medical Measurement – Ms Shiu-Chyin CHUANG

Ms Shiu-Chyin CHUANG and Mr Jin-Hai YANG presented the report on Medical Measurement 2016:

• Summarised the survey for the reporting system in place for recording medical instruments that have caused an adverse event
• Findings that 86% of respondents have a reporting mechanism
• Health authority is the sole competent agency in each economy
• Mandatory adverse event reporting for manufacturers, importers and user facilities
• Majority of adverse events reported are not covered by OIML Recommendations

Comment: Mr Stephen O’BRIEN commented that there seems to be a great deal of variety of processes for recording adverse medical events. Is there any work that you are aware of going on internationally to try an harmonise them or use similar approaches in different economies?

Response: Mr Jin-Hai YANG advised in the past we tried to harmonise all metric and organise a workshop but in early 2016 we noticed that Peru proposed same idea and sought support from APEC, so we cancelled our proposal.
Comment: President Mr Stephen O'BRIEN noted it is a complex area where you are dealing with medical staff and metrology which are the two different approaches. Appreciated the work being done in this working group.

Comment: Honorary Member Mr John BIRCH noted earlier in the meeting we were discussing carrying out a needs survey to identify possible new areas of work the Forum and as well as remembering the work on medical measurements and rice moisture measurements, both arose from a survey conducted back in 1998 on the needs of the economies and the working groups have provided major leadership of those activities and the work that has arisen out of those two initiatives has been very important. It is to be hoped that another needs survey might identify a couple more important areas which could be taken up. So look forward to that.

Please note: no written report was provided. Please see the power point presentation http://www.aplmf.org/meeting-documents.html

4.4 Metrological Control Systems – Mr GUO Su

Su, Working Group Chair, presented his report on Metrological Control Systems for 2016:

- OIML Pilot Training Center (OPTC) was held in China
- Data analysed and documented on
- How to optimize legal metrology management systems?
- How to raise awareness in metrology?
- How to produce capacity building in your organization?

Comment: President Mr Stephen O'BRIEN noted the report from the Management Seminar last year will be very useful when we develop the MEDEA workshop to be held in 2017, so we can address some of the issues that were raised. It is important that we coordinate activities.

Question: Australia, Mrs Marian HAIRE asked Mr GUO what he thinks the difference will be in the guide document that he is proposing to develop than Joint Guide 1- National Metrological Infrastructure, because it sounds that it is the same topic area?

Response: Mr GUO, clarified the guide document already developed by this working group and the member economies are different to those developed under the MEDEA project, but now the new Guide 1, is a different way to achieve that.

Comment: Australia Mrs Marian HAIRE suggested it may be appropriate the Metrological Control Systems working group to give input into Joint Guide 1, rather than developing another document that is quite similar.

Response: Mr GUO in clarification the document WG is working is not only new Guide 1 for National Metrological Infrastructure, but maybe the new guide for other such measuring instruments – so the guide would be for specific measuring instruments.

Comment: Papua New Guinea Mr Joe PANGA asked for clarification the difference between Joint Guide 1 and the guide Mr GUO is working on?

Response: Mr GUO noted the Guide 1 is developing not only APLMF but also APMP the scientific metrology area, but OIML T1 just focuses on legal metrology system.

4.5 Mutual Recognition Arrangements - Dr Charles EHRLICH

Mr Ralph RICHTER presented the report on Mutual Recognition Arrangements on behalf of the Chair for 2016:

- Overview of OIML Mutual Acceptance Arrangement (MAA)
- Framework of the OIML Certification System (OIML-CS) was approved at October 2016 CIML meeting
- CIML Members requested to participate in the OIML-CS as Issuing Authorities or Utilizers, and Corresponding
- CIML Members requested to propose technical and metrological experts for the measuring instrument covered by OIML Recommendations R 46, R 49, R 51, R 60, R 76, R 117 and R 137

Please note: no written report was provided. Please see the power-point presentation
http://www.aplmf.org/meeting-documents.html

Comment: President Mr Stephen O'BRIEN noted he agrees with the view that this is an important development and the next step in improving the OIML certificate system and asked if Mr PATORAY would like an initial comment?

Comment: OIML Mr Stephen PATORAY appreciated Mr RICHTER’s review of the resolution that was passed at the CIML and concurred with Dr Schwartz’ evaluation and comments at the end. This is a significant step for the certification system of the OIML. The work was done very efficiently and completed within one year as was prescribed by the CIML at its meeting in 2015, so we followed the roadmap and the criteria even with the death of Willem Kool in the middle of our project, so our thanks to Paul Dickson for being able to step in and be an integral part of trying to keep this project on track.

One of the disappointing things is that as Ralph mentioned there was not an overwhelming level of support for the management committee and that was the reason for the extension but obviously the work will continue no matter who is participating in the management committee but the more participation we have the better, we will be able to achieve our goal of getting this to be more globally accepted. That was one of the major problems with the unqualified system that we had in place for so many years, was that it wasn’t accepted very well. So with this being a qualified system in that no matter what the recommendation, there will still be a requirement for at least accreditation of the laboratory and verification of that accreditation. In the scheme A which is parallel to what NMAA is now the peer assessment or accreditation by identified experts is a requirement. It is the goal of the chair of the management committee to ensure that all of these 18 recommendations move to the qualified system as quickly as possible. He noted the work that has been done, the work Willem Kool started and the support given by Roman Schwartz gave to this was very important, but the members of the committee and the project group did a lot of work in a short period of time and that shows that you can do this kind of work, if you put your mind to it and you have some dedicated people that are working at it. Would encourage all to participate in the provisional management committee and as you saw there is going to be a meeting in February, possibly in Germany. The main work now is to focus on about 28 operational documents and try to get all of those finalised, they are in draft form at the moment (on the OIML website) and these were mainly developed through the work Willem had put in place to begin with and then Paul Dickson picked up and further developed them with the assistance of other participants in the project group. Hopefully this is encouraging news for all members of APLMF. The OIML certificate system is there for you to use, so that you don’t have to do all of the pattern approval or type evaluation to certify these devices, you would be able to accept the test reports that are issued by a qualified laboratory, possibly issuing your own national certificate if you chose, or you can utilise the test reports themselves to implement whatever is in your particular economy but you have the confidence because the test report and the evaluation report will be done by a qualified laboratory and qualified issuing authority. The support of this to me is very important, it is a piece of work I was hoping to complete before I leave at the end of 2018, so that date of implementation 1 January 2018 is very important to me. I am going to try to do whatever I can to make sure that does date deadline is met. He hoped we would hear from some members of APLMF to participate in the Provisional Management Committee and that you will give Dr Schwartz the
support he needs to complete the work and we will have Paul Dickson working with us until the end of 2017 and he will talk a bit more tomorrow about some of the other things that are going on at the BiML.

Comment: NZ Mr Stephen O'BRIEN (from NZ's perspective) I think NZ is primarily a utilising participant in the MAA scheme. In NZ our national approvals are based on the test reports and OIML certificates that are produced by other economies, so it is very important for NZ as a utilising participant to be part of the provisional management committee and I agree with Mr PATORAY suggestion that this is an opportunity for us to make sure that we can maintain the current confidence we have in the MAA certificates, so I would encourage economies in APLMF, even if you are a utiliser of the certificate, I think it is important that you are at the table giving your views as well as the views of economies that are certifying and issuing the type approvals. Have any of the economies made decisions around being on the Provisional Management Committee?

Comment: Papua New Guinea Mr Joe PANGA posed a question on his earlier comment on the water meter utilities. Would it be possible for countries like PNG that don’t have any well established system to do certification for approval to contribute; we could learn a lot and gain from this.

Comment: OIML Mr PATORAY noted the participation in the Provisional Management Committee is open to all OIML member states as well as corresponding members and maybe something that is not completely clear at this point, there no commitment on your part, as you participate in the Provisional Management Committee. Eventually you will be asked to sign a declaration as either an issuing authority or a utilising participant or as a corresponding member it is an associate member - again the utiliser of the test reports. The Provisional Management Committee right now is open to all members as well as liaisons and the ability to participate now and later chose not to sign the declaration, but in the case of your participation you will be able to learn more about the system, you will be able to participate with the meeting itself and the Management Committee making some of the decisions and the content of the documents that are there and the work that is being done, I would hope, then would also facilitate the ability to implement all of the 18 of the recommendations into the scheme A or the qualified system. So your support in helping this would facilitate this.

Comment: USA Mr Ralph RICHTER – addressing Mr PATORAY noted if he looks back at the slide showing the instrument measuring categories, there is obviously less than 18. Is there a list of the other categories that are part of the 18 you refer to?

Comment: Mr PATORAY noted they are published in every OIML bulletin and also on the OIML website, so yes there is a table for all of the current recommendations that have sufficient parts to be able to be part of the certificate system. All of those don’t currently have certificates issues for them, but they are capable of being in the certificate system.

Comment: USA Mr Ralph RICHTER noted so those listed in the presentation are the primary ones and then there are a second tier that have all the parts that are needed and they would also be considered.

Comment: OIML Mr PATORARY noted this was correct.

Comment: USA Mr Ralph RICHTER wanted to check that these two work items are still ok. So you asked the question and I will re-ask the question. I know the US is participating, I am assuming Japan is participating and Australia, and he asked who else.

Response: NZ Mr O'BRIEN noted NZ will be participating but we haven’t confirmed it yet, but it is his intention that NZ participates in the Provisional Management Committee.

Comment: Canada Mr Alan JOHNSTON advised Canada was considering it, his concern was that the Committee might be so large as to be difficult to render any decisions. Now that it is 5 or less Canada might reconsider that, but
he wasn’t aware of the extension, so not sure where that letter came from or where it is, he will have to take that up with his group when he gets back.

Comment: Japan Dr TAKATSUI confirmed its willingness to participate in the Provisional Management Committee but doesn’t sure if our member has already submitted this.

Comment: President Mr O’BRIEN noted that he thought the work items put forward by the WG are important to us. The fact the US is on that Provisional Management Committee, it would be quite useful if we could feed updates through to members through the APLMF website, so that even economies that aren’t represented, are able to follow what is happening.

Comment: USA Mr Ralph RICHTER noted he can take that up with Dr ERLICH but that sounds like a reasonable way to handle this.

Comment: President Mr O’BRIEN noted this work is an important step forward and one that APLMF should be supporting as it can.

4.6 Quality Measurement of Agricultural Products – Dr Tsuyoshi MATSUMOTO

Dr Tsuyoshi MATSUMOTO presented his report on Quality Measurement of Agricultural Products for 2016:

- 11 training courses completed since 2001
- 2nd draft Guide Document on rice moisture measurement proposed
- Contribution made to OIML TC 17/SC 1 and TC 17/SC 8
- Cooperation with BIPM and APMP on moisture measurement


4.6.1 APLMF Guide Document on Rice Moisture Measurement

Dr MATSUMOTO presented the draft guide document requesting comments/feedback be provided to him by 28th February 2017 after which the Guide will be published.

The scope and objective of this guide document is dedicated to the officers and field inspectors responsible for metrological control on grain moisture meters in the APLMF region. It may be also utilized as a text book in the domestic/international training programs conducted in the region. This document provides guidelines to: the basic understandings of grain moisture; moisture measurement; reference method; traceability system; consideration of uncertainty; practical measuring instruments used in the field; and practical procedures for calibrating, testing and verifying grain moisture meters.

The target instruments of this document are inferential and electric moisture meters used in real fields of production or transaction of agricultural products. Among such instruments, small-sized resistance and capacitance type moisture meters are emphasized on in this document because such instruments are used widely in the Asian economies. Rice is selected as the primary target sample because it is widely produced in the economies and Working Group has sufficient knowledge on this product. Some parts of this document though, can be applied to any kinds of grain. A reference method represented by the drying method is not directly included in the scope. It is mentioned, however, with practical procedures as an important method necessary to establish a sound traceability system.
This document is a complementary guide supporting the OIML Recommendations such as R 59 (Moisture meters for cereal grains and oilseeds: 2016) and other international/regional standards including ISO 665, ISO 711, ISO 712, ISO 6540, ISO 7700 and ISO 24557. These external documents are referred to in this document.


### 4.6.2 Report on Training Course on Traceability of Rice Moisture Measurement

Dr MATSUMOTO noted many workshops/training courses have been conducted by this Working Group since 2001, the most recent one was the eleventh follow-up program in Cambodia in 2015, which was aimed specifically at training trainers in grain moisture measurement. The course which was theoretical and practical covered:

- Basic understanding of grain moisture; traceability in grain moisture measurement;
- Understanding of related international standards/recommendations;
- Outline of standard reference method (drying method); and
- Instructions on how to use the rice moisture meters including calibration procedure.


**Comment:** President Mr Stephen O’BRIEN noted his comments relating to the Guide to Rice Moisture Measurement. It is a high quality document that has been produced through a consultative process and he thinks it is time we endorse and publish as a final guide. We would be interested in members’ comments on that. Because this is provided as a guide, we always have the opportunity to make further amendments later. He asked for any member comments on endorsing and approving this guide.

**Questions:** USA Mr Ralph RICHTER asked about the Guide R59 got approved after 10 years, so he was curious if Dr MATSUMOTO was involved in that the whole time. If we have done 11 training courses over the past 15 years, are there things in the new R59 that are going to be significantly different, that we would training the people on. His 2nd question related to R59 – Does your Rice Moisture Guide document fully incorporate everything in the new R59? Also on the guide document, he wanted to make sure how you are distributing that and are asking for comments. He did not think that the US has gotten a request for comments on that.

**Response:** Dr Tsuyoshi MATSUMOTO noted Mr RICHTER highlighted very good points. If you look into the drafted document you can easily find out that OIML R 59 is very different. The target of guide document is on how to set up reasonably equitable system in each economy or region. So, most of the content is about how to use a primary oven method and how to calibrate the moisture meter in the field. Such content is not covered by OIML R59 because R59 primarily targets to the users of the requirements for type approval systems. There is a short chapter in our guide document which briefly mentions the current situation of OIML R 59, so that this part should immediately be revised after publishing the new R 59. He thinks it does not conflict with either the old or new R 59; rather, it is a supporting document how to establish the practical system for traceability.

**Questions:** USA Mr Ralph RICHTER in clarification, back to the Guide document you have asked all the member economies to comment on that?

**Response:** Dr Tsuyoshi MATSUMOTO noted that all economies have been asked for comments.

**Comment:** Honorary Member Mr John BIRCH asked Dr MATSUMOTO for clarification. His understanding from many years ago was that we got involved in Rice Moisture Measurement because the OIML documents and the ISA ISO documents were only applied to cereal grains, not rice. Rice is quite a different product from wheat. If rice gets too dry it cracks and loses its value, if wheat gets too wet it loses its value, they operate quite differently. It was recognised 20 years ago when we were looking at this that the OIML document on cereal grains was not applicable...
to rice and when we were asked for it to be included, they weren’t interested. So we eventually went down the path of developing a document for rice. Now in your document you tend to use grain moisture measurement and rice measurement interchangeably which is a bit confusing in terms of the names of these standards and recommendations. In 2.2 you talk about the APLMF guide on grain moisture measurement, but the title is the APLMF Guide on Rice Moisture Measurement. I think that distinction is still important and if it is, we should be consistent in how we write about it.

Response: Dr Tsuyoshi MATSUMOTO acknowledged Mr BIRCH highlighted another important issue. Firstly, present R59 also covers rice in its scope, but also covers many other grain products, but in the scope rice now included in R59. There was some discussion about whether rice was a cereal grain. There been a lot of discussion when we developed the draft in Japan about whether to target only rice or all cereal grains. We tried to make the document a guide for all grains but we gave up, because we had a long history of experience only in rice, but not in other kinds of grain. In addition we hoped to publish this guide document as soon as possible, so we decided to publish it as a guide for rice. In the future, however, if we have more experience using another kinds of grain, the scope will probably be expanded. But even now, some contents of our guide document are applicable also for other kinds of grain. So that is why there is some confusion between the terms ‘grain’ and ‘rice’.

Comment: Honorary member Mr John BIRCH commented that if in fact R 59 does cover rice in fact, then there is no need for us to issue a separate document, but if its scope doesn’t cover rice, and that was my understanding, there is a need for us to issue a separate document.

Response: Dr Tsuyoshi MATSUMOTO noted if R 59 doesn’t cover rice. But the primary role of our guide document must be separated from that of R 59.

Comment: President Mr Stephen O’BRIEN noted his understanding was this guide is more around the practical application of those test methods and takes the OIML document and applies it in a very practical sense so that we can apply it in Asia Pacific economies. So rather than duplicate they are consistent but with different purposes.

Question: Chinese Taipei Mr Jin-Hai YANG in the summary you said there is a diversity of concerns between APMP and APLMF. For example in METI in Japan you are responsible for both scientific metrology and legal metrology. How can the people in these fields collaborate?

Response: Dr Tsuyoshi MATSUMOTO noted actually in NMIJ there is a laboratory for moisture (humidity) in air, but there is no laboratory for moisture content. But the scientists in his laboratory have an interest in moisture measurement, so he would need to have a discussion with the scientists. Because the moisture content is also an important factor to provide certified materials, the scientists have to control the moisture content of the materials when they provide them to the users.

Question: President Mr Stephen O’BRIEN asked if the comment around the Mass metrology course that we need to be careful around targeting the audience from the scientific and legal metrologists. So it is something we can take on board for future courses, because APLMF Secretariat Technical Expert, Julian CRANE gave him the same feedback after the training course. Even for a target field as simple as mass there is a different approach from the scientific ad legal metrology, and we need to take that into account in future courses. We are aware of that, and I think we can do.

Response: Dr Tsuyoshi MATSUMOTO noted regarding the Mass training course, his proposal is, as mentioned, there are many legal metrological people who still prefer training at a lower level of traceability. We have conducted many training courses on NAWI, and also in the near future, I suggest we include a session about the mass comparison into the NAWI training courses. This is the easiest way to implement the request from legal metrology.
Comment: Papua New Guinea Mr Joe PANGA trying to confirm if Dr MATSUMOTO was asking about the procedure for approving the APLMF guides?

Response: Dr Tsuyoshi MATSUMOTO noted this is another problem, because he cannot decide. So he proposed that present WG on Metrological Control Systems chaired by Mr GUO Su would decide on how we develop the guide document in the future. How should the guide document be approved by the APLMF? I would like some kind of procedure to be agreed in this Forum.

Comment: President Mr Stephen O’BRIEN agreed that is a good proposal. He noted tomorrow he is going to present on the strategic plan and that is another document it would be good to have endorsement and be able to sign it off as well as the guides we produce and I think I need to consult and get a process. In the case of this document, my suggestion would be that on Friday when we agree recommendations and the working plans, at that time we put a recommendation to endorse this document to the group and see if we can get consensus to sign it off. But in future I would like to document a clear process.

Comment: Australia Mrs Marian HAIRE suggested the Training Coordination WG which includes the Chairs of all the other working groups draft a practical way to do this and send it through for consideration.

4.7 Utility Meters – Mr Alan JOHNSTON

Mr Alan JOHNSTON, presented his report on Utility Meters

- Electricity meters (R46)
- Requires significant revision modification
- Revision proposal submitted at CIML at October 2016 and approved
- Water meters (R49)
- Current and harmonized with ISO
- Natural gas meters (R137, R139, R140)
- R140 Measuring systems for gaseous fuels is under review

Please note: no written report was provided. Please see the power point presentation http://www.aplmf.org/meeting-documents.html

Comment: USA Mr Ralph RICHTER noted he doesn’t consider R139 a utility meter, because it is more of a fuel dispenser type application, but new project was just approved in Strasbourg on that mostly for the application of hydrogen to those types of systems and Japan are going to be co-convenors.

Question: NZ Mr Kevin GUDMUNDSSON comment to Mr JOHNSTON and Mrs HAIRE – with regards to the water meters, if you are looking for trainers to deliver training material on water meters, would it be worth sending emails to all the members that are part of that group?

Response: Mr JOHNSTON noted that this a good idea, depending on their availability and what type of requirements they follow.

4.8 Working Group Action Points for 2017

Please note the Working Group Action Points are presented in Section 13 of these Minutes.
5 Welcome Addresses

8.30am – 5pm, Thursday, 24 November 2016

Honorary Chair: Dr Yukinobu MIKI (Director, NMIJ)

5.1 APLMF President

Mr Stephen O’BRIEN, President of the Asia-Pacific Legal Metrology Forum noted it was his very great pleasure to welcome all participants to the opening session of the 23rd Asia-Pacific Legal Metrology Forum meeting in Tokyo, Japan.

He advised we would have a welcome address from our honoured host, Mr Shin HOSAKA. Mr HOSAKA is the Deputy Director-General of Industrial Science and Technology within the Policy and Environment Bureau of the Ministry of Economy, Trade and Industry.

He noted we were pleased to have Mr HOSAKA with us for a short time to mark the importance of this 23rd APLMF Forum meeting.

He also acknowledged Dr Yukinobu MIKI, the Director of the National Measurement Institute of Japan, who would be with us for Forum meeting and assisting him as Honorary Co-Chair.

On behalf of APLMF Mr O’BRIEN passed on the Forum’s appreciation to NMIJ for its willingness to host these meetings and for the hard work and dedication that Dr MATSUMOTO and his team from NMIJ and METI had put in to support this meeting’s success.

He also thanked NMIJ for hosting a fantastic event last night.

He noted that as delegates walked into the meeting they would have caught sight of the beautiful Tokyo Bay. Tokyo Bay leads to the edge of the Pacific Ocean. It was fitting that we meet on the edge of this ocean because it links many of our economies and the trade that crosses it supports social and economic prosperity within the region. The work that we are doing this week is critical to maintaining and improving this regional prosperity.

In the APLMF forum we work to harmonise technical standards and reduce technical barriers to trade but we are also focused on improving confidence in the accuracy of measurement.

It is only through accurate measurement that Governments within our region and the legal metrology systems that support them, can effectively facilitate fair trade while also providing for good safety outcomes and environmental protection.

As a result of the need for increasing complexity in global measurement systems and the increasingly broad scope of legal metrology, it is important that APLMF maintains strong working relationships with both our global and regional organisations in the metrology area.

He noted it was a testament to the importance of these relationships, that we have Mr Stephen PATORAY, BIML Director within OIML and Dr Toshiyuki TAKATSUJI, Chairman of the Asia Pacific Metrology Programme (APMP) with us for the Forum meeting today. Those of you who attended the Working Groups meeting yesterday would also
have noted the importance of Metrology Enabling Developing Economies in Asia (MEDEA) project, this is a significant project and it is sponsored by the German Government and administered by PTB.

He also noted the Forum is fortunate to have Mr Uwe MEISNER, the Working Group Head of Asia to address this Forum meeting. He also acknowledged the presence of Past Presidents and Honorary Members, Dr Akira OOIWA and Mr John BIRCH and noted it was particularly helpful to have their assistance and guidance as a new president. He also acknowledged that Mr PU Changcheng, Immediate Past President was unable to attend, but welcomed Mr DU Yuejun who will ably deputise for Mr PU at this Forum meeting.

Stephen commented that we have the right people in the room, an excellent venue and the right support in place for an interesting and productive Forum meeting. He also acknowledged the importance of what we do in relation to manufacturers and so it was great to have manufacturers represented at this Forum and he encouraged participants to take the opportunity to visit and talk with the manufacturers who would be present during the breaks at the back of the room.

The President introduced Mr Shin HOSAKA, Deputy Director-General, Industrial Science and Technology Policy and Environment, METI to open our meeting.

5.2 Mr Shin HOSAKA, Deputy Director-General, Industrial Science and Technology Policy and Environment Bureau, METI, Japan

Mr Shin HOSAKA, Deputy Director-General of the Industrial Science and Technology Policy and Environment Bureau at METI opened the APLMF meeting on behalf of the Host. He welcomed Mr Stephen O’BRIEN - APLMF President, Mr Stephen PATORAY - BIML Director and distinguished guests from the member economies.

He noted it was a great honour for the Japanese economy to have the third opportunity to host the APLMF meeting. The last meeting hosted by Japan was 13 years ago. He was pleased to welcome such a large number of participants to Japan.

On behalf of METI, which is responsible for metrological administration, he focused on the following topics:

Firstly, he talked about the current movement surrounding the metrological control system in our economies. This system, together with the monetary system, is the most basic and necessary infrastructural supports of economic activity, from industrial activities to daily life.

He understood that the metrological control system in his economy began when the Taiho-Code was established in the year 701, about 1,300 years ago; however, the metrological control system has changed with the times. He noted these days, international rules such as the decisions of “The Convention of the Meter” and “The Convention establishing an International Organization of Legal Metrology” are introduced into the system and administered and are spread throughout our economy.

He advised, in order to respond appropriately to changes in the social environment surrounding administration in metrology and current technological innovations, we are reviewing the current metrological control system for its revision in the near future. Additionally, on the premise of ensuring the high reliability of the metrological control system, we aim to update the corresponding system to current requirements. For example, we will promote the entry of private business operators with high technological competence into verification systems. Another example is adding a new category of measuring instruments which will be subject to the legal metrological control.
Secondly, he talked about the contribution of environmental policies. This month, on the 4th of November, the Paris Agreement of COP 21 entered into force. With this agreement, all parties have the duty to establish their own goals related greenhouse gas emissions and execute national measures in order to achieve their goals. Therefore we feel that every economy’s response to Global Warming has become more important.

As one of the responses, the Japanese economy promotes the realization of a hydrogen-based society because hydrogen is being considered for use in various fields. Especially, fuel cell vehicles have already entered the market and the hydrogen re-fuelling stations are in service. With the increased popularization of these systems, we believe that the highly accurate hydrogen dispensers will play more critical roles in the future.

In addition, we anticipate that other economies in addition to Japan will face a technological problem in technology regarding hydrogen dispensers. Therefore, in order to harmonize the technical standards of the hydrogen dispensers around the world, our economy suggested a new project on these dispensers to OIML, which was approved in the last CIML meeting. He asked to cooperate to deepen discussion if your APLMF member economies could support this project, and cooperate to deepen discussions.

Thirdly, he talked about the importance of the international cooperation, which is closely related to the objectives of the APLMF. In these days of globalization, the various systems, customs or practices which each economy has developed independently are mixed together; this situation is causing a variety of problems. In order to solve these global issues, it becomes more important for all economies not only to implement bilateral cooperation efficiently and effectively, but also to make the most of international and regional organizations in metrology.

He noted the APLMF consists of Asia-Pacific economies and their total GDP accounts for about half of global GDP; therefore, APLMF can be one of the most important regional organizations for legal metrology. The cooperation in a regional organization and especially in such a large-scale organization, APLMF, to solve regional issues and to harmonize their systems can contribute to solving common global issues in metrology.

He noted the Japanese economy’s support for the objectives of APLMF that are:

- to exchange information among legal metrology authorities;
- to achieve harmonization to remove technical or administrative barriers to trade; and
- to assist developments in the member economies together as a whole.

He noted his sincere hope that positive and active discussions among the legal metrology authorities will occur in this meeting, and that the result of this meeting will contribute to developments in the legal metrology in each economy.

He thanked everyone for their attention.

The President thanked Mr HOSAKA for his opening words and noted we are looking forward to a presentation on hydrogen later today; we are very keen to hear about the work Japan is doing on this area.
6 APLMF Business

6.1 Roll call

41 delegates attended representing 16 of the 19 member economies.

The member economies attending were: Australia, Cambodia, Canada, People’s Republic of China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, Philippines, Singapore, Chinese Taipei, Thailand, United States of America and Vietnam.

2 delegates representing Corresponding Member, Russia.

6 honoured guests/observers attended including invited representatives from OIML and PTB and representatives from India.

6.2 Confirmation of 22nd APLMF Report

The President noted the draft had been circulated to members for comment. He also noted that it was a very big document and the Secretariat intended that future minutes would be more succinct with links to presentations and reports.
The report of the 22\textsuperscript{nd} Asia-Pacific Legal Metrology Forum and Working Group Meetings held in 27-30 October 2015 in Hawaii, United States of America was confirmed without modification.

### 6.3 Report- President/Secretariat Activity

Mr Stephen O’BRIEN reported on the activities of the Secretariat since the 22\textsuperscript{nd} APLMF meeting:

- Completed the transfer of the APLMF secretariat including documents, files and funds from China to New Zealand,
- Reviewed and created refreshed APLMF website,
- Financial management and reporting using Xero Accounting software,
- Focus on setting up governance structures (e.g. Xero, Googledrive, Weebly) that are easily transferred to future secretariat hosts,
- Contacted member economies to update their directory and contact details and a number of Economies have done so. Encouraged members who haven’t to contact Secretariat@aplmf.org to provide a template for updating,
- Circulated regular electronic newsletters,
- Participated in the MEDEA Coordination Committee supporting projects and training,
- Carried out surveys to develop guides providing support for the verification of measuring instruments,
- Maintained and strengthened working relationship with OIML (RLMOs), APEC (SRBs) and other international and regional organisations
  - Set in place a convenor for SRB (in process of selection)
  - Undertake a mapping exercise of APEC’s work programme and the capability and specialist knowledge within the SRBs and maximise the leverage out of those organisations
  - Developing Online training modules – significant step forward. Online modules would be complementary to training delivered.
- The President invited members to provide content for the website or feedback on content to secretariat@aplmf.org.

For future APLMF meetings we will be encouraging members to submit economy reports and working group reports a lot earlier, so they can be circulated in good time for members to review a month prior to the meeting, so we can maximise meeting time to discuss issues rather than reviewing reports.

The President noted the Secretariat’s appreciation for the support we have had from the previous Secretariat (China) and from members and moving forward we have some exciting initiatives underway and we are in good shape to achieve these over the next few years.


**Comment:** Australia (Mrs Marian HAIRE) A long time ago when Japan hosted the Secretariat we used to have a focus on each Economy every so often, so wondering if we could share the responsibility for generating the newsletter and having some stories from each economy. Suggested creating a roster for a short articles from member economies for newsletters.
6.4 Presentation of Strategic Plan

Mr Stephen O’BRIEN presented a draft Strategic Plan 2016-2021 which was endorsed by the Executive Committee at its meeting on 22nd November and has previously been circulated to members. The APLMF working strategy looks out over 5 years. It is a living document and will be reviewed at least every two years by the Forum to take into account changes, opportunities and challenges. To develop the strategy, we looked at the intention of the Memorandum of Understanding and developed a vision and mission for APLMF.

6.4.1 Key Objectives

- Supporting capability
- Organisational strength and steering
- International representation and collaboration

6.4.2 Strategic Priorities

- Organisational Systems and Steering
  - Working Groups
  - Annual Meeting
  - Membership
  - Governance

- Communication
  - Improved communications by Forum
  - Promoting awareness of metrology
  - Metrology Asia-Pacific - Portal

- Training and Knowledge
  - Training Coordinator role
  - MEDEA project and beyond
  - Online learning
  - Support OIML International Initiatives
  - Evaluation

- International Collaboration
  - OIML
  - Specialist Regional Bodies (SRBs)
  - Pacific Islands


Stephen invited questions or clarification of objectives, priorities and actions:

Question: USA Mr Ralph RICHTER – Are you revising an existing strategy document or is this newly created.
Response: President Mr Stephen O’BRIEN – Advised he was not aware that there was a strategic plan document in existence. This is a new document, but historically, there may have been one and he referred to Mr John BIRCH.

Comment: Honorary Member Mr John BIRCH advised that historically he is was not sure there was a strategic plan document, but throughout the history of the Forum had a forward plan for our activities. He also noted he generally agreed with the plan as presented with some slight word changes to the Mission Statement. He noted that APEC was set up as a free and open trade organisation as is stated in the Mission Statement and challenged in some ways by various free trade agreements which are not open and free, but in fact limited to the members of those free trade agreements and the TPP would have been one example of that. He suggested changes in the Mission statement to reflect harmonisation to international requirements rather than local requirements. These were passed on to the Secretariat to update the document.

Comment: USA Mr Ralph RICHTER noted he was surprised there was no existing strategic plan document given the time the organisation has been operating, so this is a very good step forward.

Comment: Japan Dr Yukinobu MIKI – International collaboration, OIML roundtable meeting in Strasbourg in October. At that meeting collaboration among RLMO’s were discussed and E-learning is one of the key issues. APLMF is keen to develop modules and also BIML also has a project to develop e-learning and AFRIMETS has many materials to share. It thought APLMF can take a lead in this collaboration.

Comment: President Mr Stephen O’BRIEN noted that the key element is that we don’t duplicate efforts across the regions and then there are other regional legal metrology organisations like COOMET where they have training materials which may be available.

Question/Comment: Australia Mrs Marian HAIRE thought the Strategic Plan was a fantastic document and lays out a future path for us. The first section organisation systems and steering covering the working groups and we talked about this yesterday i.e. refreshing the topics and wondered how we are going to get from where we are now to where we want to be i.e. working groups that have at least 3 people in each group. There needs to be a process… do we disband all working groups and put forward some new topics… which is a complex process.

Response: President Mr Stephen O’BRIEN referred to the Working Group New Guidelines and Operational Processes proposal and noted that the intention is not to disrupt the current working group structure, but over the next year, the Executive Committee works with the WG Chairs to refresh and redefine the terms of reference for each group and if out of that process, there is a need to disestablish a working group, or create a new one, we would be looking to bring that recommendation back to the next Forum meeting. He noted though that he did want to move on making the Training Coordinator part of the secretariat, and he would be making a recommendation specifically on that to the Member Only meeting on Friday morning.

Comment: Australia Mrs Marian HAIRE thought this was a very orderly process.

Question: USA Mr Ralph RICHTER asked how we are going to progress the adoption of the strategic plan as an official APLMF document.

Response: President Mr Stephen O’BRIEN noted his initial thought was that the Strategic Plan be send out before the meeting and discussed at the meeting and if there was a consensus that it could be adopted as it is then happy for it to be adopted with the proviso that we are going to review it on a regular basis. But if members were unhappy about this approach, we could alternatively look at another method of approving the document online or at the next meeting. He asked for feedback on this.

Comment: USA Mr Ralph RICHTER noted USA would like a couple of months to review the document in more detail before it becomes formally adopted.
Comment: Australia Mrs Marian HAIRE noted she had developed draft procedures for adoption of documents which she shared yesterday with the Secretariat. These procedures are in line with Mr RICHTER’s suggested period of consultation and suggested this procedure be adopted for review and agreement of all documents.

Response: President Mr Stephen O’BRIEN noted he was in agreement with that approach.

Question: Russia Professor Lev K. ISSAEV asked if it is necessary to mention something in our strategy some activities with accreditation bodies e.g. APLAC, ILAC and other accreditation bodies. He noted problems in Russia where accreditation bodies are trying to be in activities of legal metrology. We are working with them to explain that it is not right because we have our own requirements and at the moment they are trying to get verification procedures for assessment of conformity. Assessment of conformity is accreditation and so they are trying to get verification procedures under the accreditation. For Russia this is a problem and his question is related to that.

Response: President Mr Stephen O’BRIEN noted that he understood the problem and we are trying to alleviate that issue by clearly understanding what the various specialist regional bodies do. We meet with the Asia-Pacific Accreditation body at the APEC Forum and I think our focus is, when we say collaboration, we mean communicate and collaborate with those bodies to clarify what role each SRB has and how we work together, so we are trying to avoid those sort of issues by having a collaborative relationship at a regional level so we know what each SRB is doing. One of the problems that APEC is facing is that the issues they deal with, they want to talk about over-arching issues like safety of water, health, environmental protection etc. They don’t really make a distinction about what is an accreditation issue and what is a metrology issues, so we are trying to work together at the APEC level to alleviate some of those misunderstandings.

Comment: Australia – Mrs Marian HAIRE congratulated the Secretariat on their work in developing a Strategic Plan for consideration.

7 Working Group – Action Plans

Mr Kevin GUDMUNDSSON presented the draft Working Group Action Plans. Amendments were made and WG confirmed their action plans for 2017. The finalised Action Points are detailed in Section 13 of these Minutes.

8 Reports

8.1 APMP – Dr Toshiyuki TAKATSUJI

Dr Toshiyuki TAKATSUJI, President, APMP reported on APMP activities as follows:

- New Membership – Associate members – Malaysia, Mongolia, UAE and USA
- APMP focus groups on:
  - Energy Efficient (NIMT, Thailand)
  - Food Safety (NIM, China)
  - Medical Metrology (CMS/ITRI, Chinese Taipei)
  - Climate Change and clean air (KRISS, Korea)
  - Clean Water (rSM-LIPI, Indonesia)
Mid-year meetings were held in Bangkok, Thailand 2–10 June 2016


Question: President Mr Stephen O’BRIEN asked what criteria APMP uses for new membership.

Response: Dr Toshiyuki TAKATSUJI, President, APMP advised only the economies located in Asia-Pacific region are able to be full members of APMP. APMP welcomes economies from other regions as Associates.

Comment/Question: Honorary Member Mr John BIRCH, thanked Dr TAKATSUJI for his report. He noted he was involved in setting up APMP back in 1978 with Dr Khan from the Commonwealth Science Council and in those days membership was limited to commonwealth countries in Asia, but that was soon changed. Asked for a general idea of what income is derived from membership fees annually, as we are going to be talking about our own membership fees on Friday.

Response: Dr Toshiyuki TAKATSUJI, President, APMP noted the membership fee for full members and corresponding members are the same. There are issues for some countries to transfer money, so in such cases these countries don’t have to pay membership fees but we don’t suspend their membership because they are not able to pay. One problem is that APMP is not a legal entity so there are difficulties in making contract with banks for payments. Last year APMP tried to revise its MOU to describe the history of APMP founded in 1977 in India and now we are aware next year is the 40th year anniversary of APMP. They are planning an anniversary event in 2017.

Comment: President Mr Stephen O’BRIEN thanked Dr TAKATSUJI for his presentation.

8.2 BIML - Mr Stephen PATORAY

Mr Stephen PATORAY, BIML Director reported on BIML activities as follows:

- World Metrology Day – record number of hits on website
- BIML Assistant Director position to be advertised
- Welcomed Thailand as a new Member State
- CIML Members are encouraged to put forward representatives for the ‘Provisional Management Committee’ (PMC)
- 51st CIML (2016), committee approved the following final draft publications:
  - New Recommendation Protein measuring instruments for cereal grains and oilseeds
  - Revision of R 59 Moisture meters for cereal grains and oilseeds
  - New Recommendation Standard blackbody radiator for the temperature range from –50 °C to 2500 °C
- 52nd CIML (2017) will be held in Cartagena, Columbia
- 53rd CIML (2018) will be held in Hamburg, Germany


Question: Australia Mrs Marian HAIRE on R76, Mr PATORAY was saying BIML are going to produce an appendix for verification, I am sure other countries other than Australia have documents on verification, so she would hope that rather than starting from a blank page, they would look at verification documents that already exist in the world.

Response: BIML Mr Stephen PATORAY noted he would absolutely agree with that, which is part of what the project group will be doing and members of the project group will step forward with all of their own individual information
e.g. Germany and France both have similar kinds of things. He noted we are not trying to create something new, but rather put together collating what is available from members of the project group.

Comment: Australia Mrs Marian HAIRE noted that the guide document Kevin introduced yesterday, looks at this whole region and how we think these test procedures should be performed.

Comment: President Mr Stephen O'BRIEN noted that at OIML he was able to catch up with Ian about the learning management system (LMS) they are developing and it will be very useful for us because that is the sort of mechanism that sits behind the content. We (APLMF) can focus on high quality training materials. We can have it hosted on the LMS and just because it is hosted there we can still come through the Metrology portal or the APLMF website, so in the world of websites, it sounds like it is easy to do that. We can utilise this and that is a very valuable step forward and we will be following up on that.

Comment: BIML Mr Stephen PATORAY noted Mr O'BRIEN's comments are correct and the way BIML's server is set up and the way the system operates, we are very open to have the ability to link with and connect to other sites. The way this is set up, it is not going to be accessible to everyone. The ability to learn how to get the proper information, who is going to upload to the site and administer access are still details to be worked out. All of that is available and we certainly are open to have that access very similar to what the advisory group is going to have on their website, where they can upload materials or have access to it from various places, so the website itself is very flexible and we have some very good people who administer it and we can pretty much adapt.

Comment: President Mr Stephen O'BRIEN thanked Mr PATORAY for his presentation.

8.3 MEDEA

Mr Uwe MIESNER, Head Technical Cooperation in Asia, Physikalisch-Technische Bundesanstalt (PTB) reported on PTB/MEDEA activities:

- PTB Technical Cooperation – Mission
- Functioning quality infrastructure
- Project Portfolio – Asia
- Outlook for 2017


Comment: President Mr Stephen O'BRIEN thanked Mr MIESNER for the presentation and we do appreciate the work going on in the MEDEA programme and we can see there is a lot of other work going on supported by PTB.

Comments/Questions: Honorary Member Mr John BIRCH thanked Mr MIESNER for his report and it is good to hear what PTB is doing in this area for so many years noted it is a credit to the German aid agency they are prepared to consider continuing with the MEDEA programme. He wondered to what extent you are expected to relate activities to the millennium development goals and some of the multi-lateral agencies, in particular The World Bank. They don’t seem to have much of a perspective on Metrology and to what extent PTB has been able to get through to them. They issued a world development report back in 2002 which was developing institutions for markets and metrology didn’t get any mention which must be the oldest institution for developing markets in the world.

Response: Mr Uwe MEISNER noted the first point millennium development goals – in fact it is a framework and last year the sustainability development goals came into the picture and replaced these and now provides the framework
of our development cooperation with broad topics like reducing poverty, having clean water and health and improving international collaboration. Quality is involved in many aspects, not explicitly but implicitly we try to make it more explicit and to point out in our projects offers and frameworks because his Ministry is paying a lot of attention to achieving and aligning our activities with these sustainable development goals. It is a very important framework of our activity. We have to demonstrate the impacts finally relate somehow to the sustainability development goals either trade, health, environment or energy. So the link has to be made and because we regard quality as a cross-cutting issue usually it can be demonstrated; we just have to track back the value train from what we do technically and to how it reaches the consumer, environment, population etc. This we have to make explicit to also sell to our decision makers for our funding agency. So we see ourselves as a translator from political of abstract objectives into technical solutions and vice versa; technical offers into more politically translatable development objectives.

In the second question regarding World Bank also very true. World Bank is by far the largest provider of technical and financial assistance, yet they have a very small unit on quality infrastructure. Right now we are having an internship for one year within the World Bank; working on some methodology, asking questions and hope to demonstrate impacts, how to assess a country in terms of quality infrastructure development. So far contact is very limited especially in the Asia-Pacific. Here we are looking more at the ADB which also have large portfolios which touch on quality issues and we try to be in touch with ADB to use as a leverage to really achieve reforms because with the multi-billion grant at your back you are much more powerful than just providing some expertise to convince decision makers to adjust your quality infrastructure according to international guidelines. So, those points are very valid and thanks for pointing them out.

9 Presentations from Host Economy

Dr Yukinobu MIKI, Co-chair introduced the afternoon session, presentations from the Host Economy, Japan. He noted it was thought it would be good chance to present on three topics today.

9.1 Metrological Control System of Japan

Ms Yuka OKADA representing the Metrology Policy office of Ministry of Economy, Trade & Industry (METI) presented on the Metrological Control System of Japan:

- Introduction
  - METI organisation chart
  - History of the Measurement Act
  - Organisations related to the Act
  - Purpose and structure of the Act
- Establish the Standards of Measurement
  - Unification of measurement units
  - Calibration of measuring instruments
- Ensure Execution of Proper Measurement
  - Commodity Quantities System
  - Regulation of Specified Measuring Instruments
  - Measurement Certification Business System
  - Certified Measurers System
  - Proper Measurement Control Business Places System
- Enforcement
9.2 Roles of the Inspection Institute of Weights and Measures of Tokyo Metropolitan Government – Verification and Inspection of Standards

Mr Takeshi NEGISHI and Mr Ken ASOU representing the Inspection Institute of Weights and Measures of Tokyo Metropolitan Government presented on verification and inspection standards in Japan:

- Outline of Tokyo Metropolitan Government
- Implementation of reliable measurement
- Measures to supply accurate measuring instruments
- Activities
- Operation of verification staff
- Verification of fuel dispensers
- Certification of clinical thermometers
- Verification of hydrometers
- Operations of the group for weight instruments and pressure gauges
- Verification of pressure gauges
- Verification of sphygmomanometers
- Verification of weighing instruments
- Inspection of standard weights

9.3 OIML Project on Hydrogen Dispensers

Dr Toshiyuki TAKATSUJI representing NMIJ presented on OIML Project on Hydrogen Dispensers:

- Introduction to a revision of OIML R139 to accommodate hydrogen metering systems for motor vehicles
- Current situation and future plan of FCV (Fuel Cell Vehicles) and HRS (Hydrogen Refuelling Stations) in Japan
  - Accuracy classes of MPE
  - Compensation for hydrogen de-pressurization loss
  - On-site inspection for complete measuring system
- Proposal for revising R139
  - Approved at CIML meeting
  - Accuracy classes to be proposed to the revision
  - Tentative plan
- OIML TC 8/SC 7: Gas metering
- TC 8/SC 7/p 7 Workspace

A small gift of appreciation was presented to each speaker by APLMF President, Mr Stephen O’Brien.
10 Economy Reports

Please note: Full Economy reports and presentations provided by economy representatives are available on the [http://www.aplmf.org/meeting-documents.html](http://www.aplmf.org/meeting-documents.html) under the Economy Information section. Below is a summary from each presentation and questions/comments.

10.1 Australia – Anthony Donnellan – Manager Legal Metrology Policy National Measurement Institute Australia (NMIA)

- Grain quality measurement
  - NMI hosted the 17th Grain Quality Measurement Committee meeting
- Trade Measurement Community Savings Programme
  - Aim is to determine the value that trade measurement delivers to the community
- National Compliance Programme
  - Aim is to minimise non-compliance and maximise business and consumer protection
- Review of the strategic policy objectives of legal metrology
- Shift to principles-based legislation

**Question:** Canada Mr Alan JOHNSTON asked about the infringements, are they civil penalties or don’t require prosecution?

**Response:** Mr Anthony DONNELLAN outlined the process starting with awareness raising, then issuing notices of non-compliance or notice to remedy, warning letter, infringement notices (strict liability offences with no intent) and then prosecution through the Commonwealth Department public prosecutions. There has been some cases very recently where we prosecuted a major retailer over short measured product. That went to court, the retailer pleaded guilty. He noted the problem is usually resolved at the infringement notice stage.

**Comment:** India Mr Nikhilest JHA noted that Legal metrological departments are mostly working on an on a stand-alone basis. So, like one of your suggestions it should be combined with ISO and IEC standard at least in the weights measurements, but I think there is a need to expand the scope of the legal metrology principle because otherwise it is not getting anywhere. It would be good to see all these different organisations combined under one umbrella and make them more effective at a macro level and at a country level also we need this kind of system. So perhaps APLMF/OIML can suggest way and methods to achieve this.

**Response:** Mr Anthony DONNELLAN noted those useful comments and Mr PATORAY and Mr O’BRIEN may wish to reply to that, but as a cursory response from Australia, I would tend to agree, and from a risk point of view what we have to look at from a national economy perspective is the comparative advantage of our industries and where metrological control frameworks will provide value to them. Similarly, and I don’t think that simply just covers off on the quantitative measurement side, the qualitative measurement side which you are talking about with rice or any of the other cereals products as well is key and it is key for a number of economies including Australia. In terms of the broader question, involving other international organisations TC12 was just one example where there are, and I wouldn’t even say that they are necessarily competing standards, I think they are complementary on a number of levels; the issue is
Mr JHA’s question of how to bring everyone together under one umbrella probably transcends comment I can make on this, but happy for others to comment on that matter.

Mr Stephen O’BRIEN noted the challenge identified when we talk about the secretariat work programme, SRB/APEC which brings together accreditation elements, standardisation and metrology at the APEC regional level. We are grappling with the same issue there, where we are, how can we work together to ensure there is a whole quality infrastructure supporting responding to these sort of issues. But I note Mr JHA’s question and it is something we need to think about as we move forward.

Mr Nikhilest JHA (India) noted in an earlier presentation about OIML certification system is being developed and operational from January 2018 – how is this different from ISO system and why it has taken so long to develop this kind of certification system?

Comment: OIML Mr Stephen PATORAY clarified the OIML certification system has been in place since 1991. This is an enhancement or improvement to the current system. ISO is a certification of people or places and ISO9000 is a certification of a location or a manufacturing facility, a quality system of things that relate to your quality of what you manufacture. The OIML certification is an actual certificate for a piece of equipment and ability to meet requirements of OIML recommendations. So there is a significant difference between the certification of an ISO and OIML.

He also noted the other part of the discussion regarding combining or some kind of overriding system the OIML is an international treaty organisation whereas ISO is a private organisation – they are entirely different structures and how they operate, so there is no system that could overarch both systems. However OIML does work with ISO to create jointly developed standards. The problem is that in most cases the OIML system is slower in developing its products and can’t keep up with ISO’s business approach to creating their standards; so it is difficult to work in sync. OIML recognises this issue and if OIML could determine how to speed up its process, I am sure ISO would be more than willing to cooperate with us in a larger number of areas.

Comment: President Mr Stephen O’BRIEN thanked everyone for their valuable insights into these complex issues. He noted that NZ is embracing the risk based approach to compliance and enforcement similar to Australia. He noted Australia’s National Compliance Plan for 2016-17 financial year is on is on their website.

Comment: Honorary Member Mr John BIRCH commented that he had been involved with producing water meter ISO/OIML standard R49 2000 – this was produced at the same speed. Need to recognise OIML and ISO standards are aligned but not the same. The last thing you want to do is regulate an ISO standards. OIML standards do need to be regulated. They serve difference purposes.
10.2 Cambodia – Mr KHLAUT Ousa – Deputy Director of Legal Metrology Department, National Metrology Centre (NMC)

- National Metrology Centre (NMC) vision is to improve metrology to be a core component in the development of industry, services, science, and technology and to form the basis of economic growth.
- NMC Established the National regulation on verification on NAWI following OIML and ASEAN Requirements
- NMC provides extensive annual training programmes and series of special workshops and seminars

Comment: President Mr Stephen O’BRIEN commended Cambodia on their commitment to improving your international connections.

Comment: Honorary Member Mr John BIRCH noted that Cambodia has crime control metrology as one of your activities. He asked if that just covers fraud or other areas of crime control.

Response: Mr KHLAUT Ousa advised right now in Cambodia we cannot control fraud on the importation of metrology instruments, so it is very difficult for us. We are trying to learn from the mechanisms of ASEAN countries like Singapore, Vietnam, Malaysia and Thailand. Singapore checks the OIML certificate of the products that come into their country and also Vietnam carry out type approval before the product comes in the country. We are considering which way we should move forward the control of the importation of products.

10.3 Canada – Mr Alan JOHNSTON - President, Measurement Canada

- Online Reporting Application for Inspection Activities
  - web-based application to report the results of scale, gas pump and other measuring device inspections
  - Enables uploading of inspection data directly from the authorized service provider’s data base to ORA
- Approval of Timber Dimensional Measuring Devices
- Electric Vehicle Charging Stations - approximately 3000 registered chargers in Canada with more installed every day
- Compressed Natural Gas - Reviewing the suitability of the gravimetric method for performance assessment of higher flow rate capacity CNG dispensers and the feasibility of alternative test methods (e.g. use of an in series master meter).

Question: Honorary Member – Mr John BIRCH asked if Mr JOHNSTON could write up Approval of Timber Dimensional Measuring Devices for the OIML Bulletin if it hasn’t already been done?

Response: Mr Alan JOHNSTON advised that he would have to look at proprietary rights, but will look into that. He noted Canada had run into problems in the past where we haven’t received the appropriate permissions when using some of the technology information provided by manufacturers.

10.4 People’s Republic of China – Ms LI Mengwan – Official, AQSIQ

- Established a National Metrological Strategy Advisory Committee
  - 18 experts composed of the academicians, experts, scholars to provide decision support for the development of metrology nationally.
- To strengthen the national reference material research and development
- Promote the construction of national industrial metrology centers
Established the world’s first "OIML Pilot Training Center (OPTC)" in China

Question: Honorary Member – Mr John BIRCH thanked Ms LI for her talk, he noted he was very impressed by her comment that China maintains 183 national measurements primary standards. To what extent are they physical, chemical and maybe biological standards?

Response: Ms LI advised some of the standards are primary standards in the chemical fields, but most of them are physical primary standards.

10.5 Indonesia – Mr Hari PRAWOKO – Director, Directorate of Metrology

Indonesia on hosting MEDEA Training Course on Mass Standards August 2016

National Seminar on Metrology was held titled “Metrology role to improve the quality and competitiveness of national products in order to increase the economic growth”

Division changes in governmental affairs

Academy of Metrology

Acquisition of interferometer

Question: Honorary Member – Mr John BIRCH noted he was talking to Mr Rachmat GOBEL (former Minister of Trade, Indonesia) about a decision by the Indonesian President earlier in 2016 to expand the access to electricity in Indonesia. He is proposing to build over the next 5 years 100 new power stations, double the amount of generated electricity having 43 gigawatts of electricity over 5 years to the Indonesian system. Whether they will do it remains to be seen, but from the point of view of legal metrology that is going to be a major challenge in terms of electricity metering and he tells me the same sort of problem exists in terms of gas access and metering. It is an absolutely amazing expansion if it is going to occur and how the metrology people will handle it is going to be quite a challenge.

Response: Mr PRAWAKO noted we understand the expansion will provide challenges for Legal Metrology Indonesia and that is why the revision of the legal metrology law we introduced; what we call the ‘third party verification system’ will help us to verify measuring instruments.

10.6 Japan – Dr Toshiyuki TAKATSUJI- Director RI Engineering Measurement Measurement, NMIJ

Participation in many OIML Activities

Review of metrological control system

Technical requirements of measuring instruments have been transferred into Japan Industrial Standards (JIS)

A new multilateral training program is proposed for 2018.

Question: Indonesia asked about Japan’s training course. Indonesia had tried to apply for the course several times but it hasn’t worked, so it was interested if there is any special procedures or application for the next training course in 2018.

Response: Japan noted we are proposing a new training course. If it is approved it will be conducted in 2018 or later, but we cannot assure it.
10.7 Republic of Korea – Mr Seongboo JEONG – Researcher Korea Testing Certification

- Electrical Vehicle charging units will be legal measuring instruments in early 2017
- IT based monitoring system introduced to track the compliance rate and history of NAWI’s using (Bar code, QR code, NFC)
- MoU signed in the field of Legal Metrology with China (March 2016)

Question: New Zealand Mr Kevin GUDMUNDSSON asked about the slide regarding keeping the history checks of NAWI. Are you putting a requirement instruments that have a barcode? Is that going be a requirement for you and then the approved verifiers that are testing it, do they have to upload this information onto a platform which then reads the barcode? How does that system work?

Response: Mr JEONG - What it means is that the scanners are really portable. We would actually install the NFC tags which allows the verifier to keep track on what is going on and for example; it detects such things as a seal being open, you would get connected to an application, so everyone uses a smart phone. We are in a development stage to make an application so that public officers in the field in the near future, when they go around and check the scales, it will reduce the amount of paper work, and as long as you put a tag, if you are close to it, you can basically check it. What happens is the plate, there is so much information. Those kind of issues will be resolved and if anything goes on for example, the seal is broken, it gives a real time clock service. It gives you the information live on the application.

Question: New Zealand – Mr Kevin GUDMUNDSSON asked if that then can be applied to any sort of instruments, e.g. fuel dispensers or only developed for NAWI.

Response: At the moment it is focused on NAWI, because it is mobile and portable and a lot of NAWI are imported and illegal, so we want to stop. After two years we have to do the check and it gives notification to the calibration that it is time to check.

Comment/Question: Honorary Member - John BIRCH interested in comments about non-legal units in real estate contracts. It’s a real challenge when a nation metricates its system. Most measurements can be metricated, the ones which are the most difficult are real estate (land titles) in imperial measurements. We had this problem in Australia and what we had to do was to make provision in our Act for those particular applications in real estate to be allowed, so they are not non-legal units, they are legal units but not SI units and I don’t think it would be non-legal otherwise the real estate contracts would not be legal. However, it is a tricky one and New Zealand is just about to celebrate 40 years in metrication.

10.8 Malaysia – Mr Adam AZMAN, Head of Legal Metrology Unit, MDTCC

- Involved in the introduction of the ‘International Maritime Organisation’ SOLAS requirements for shipping containers to be provided with a ‘Verified Gross Mass’ statement before being exported
- Completed project to check the accuracy of weighbridges used for in the palm oil industries
- Mobile customer service counters are opened to receive consumer’s complaints and provide consumer advice
- Updates to regulations to be introduced in 2017 which will include rice moisture and tyre pressure measurements and egg grading machines
- 1,200 Automated Enforcement System installed on highways nationwide
Comment/Question: President Mr Stephen O’BRIEN noted he was very interested to hear about the work Malaysia is doing with speed cameras. It would be interesting to get some data on the deaths or injuries that have prevented. You obviously have a couple of initiatives going there with increased reflectors on trucks and increased use of speed crammers, because quite often it is very hard to quantify the benefits of legal metrology, but if you have introduced a number of initiatives and you are able to show how many deaths or injuries prevented that has a real social and economic cost, which can be calculated. Have you thought how you could monitor the difference you are making in that important area?

Response: Mr AZMAN responded that with the implementation of AES the numbers of fatalities for one year is up more than 400,000 incidents reports, so after the installation of the AES, the numbers increased up to 50%.

Comment: Honorary Member Mr John BIRCH noted generally on that topic, over the years Australia has introduced various speed cameras, breathalisers etc. but because it is State responsibility it was only usually introduced by one State because of some political pressure and then the effects of it were so great that all the other States were forced to introduce. We have a reverse one going on at present, where we have systems in operation that measure the time/distance travelled by our car over an area and you measure the average speed and all the States introduced this for trucks and cars except one State (NSW) where the country party didn’t want it introduced because of the people in the country might get fines, it doesn’t apply to cars and they have done an analysis quite recently about the number of people who have been killed in those areas … something 24,000 people were picked up speeding, but were never fined, because it was never applied to them. There has been some quite dramatic figures published how over the last five years there would have been a large number of lives saved by those accidents which occurred in those areas because the technology wasn’t being used. So they have done both the experiments - introducing it, seeing its affect and also not introducing it and seeing its affect.

Question: Australia – Mrs Marian HAIRE – noticed Malaysia has got the E-repairer, which sounds like same system that Korea has with the IT monitoring system. It seems to be an automatic way of identifying where instruments were and their history - could you explain how it works?

Response: Mr AZMAN explained every instrument in Indonesia (including those imported e.g. from China, Vietnam) the Pattern Approval number is recorded. When the instrument is sold it must be verified first. So all instruments are recorded in the system and then the system links the seller/instrument/ consumer to the verification office and to the Ministry. By doing that we now can track where the instruments are and then all 75 branches have access to know where individual instruments are. So inspections can be done during market surveillance and also we can prevent fraud e.g. sticker manipulation and other infringements.

10.9 New Zealand – Mr Kevin GUDMUNDSSON – Legal Metrology Advisor, MBIE

- Trading Standards continues to investigate the Chicken industry over the inclusion of excreted fluid in prepackaged chicken into the net weight value
- Ministry of Transport proposing to move away from requiring taxi meters to be verified and adopt an approach based on fair negotiation and contract such as UBAR style system. Trading Standards opposes this policy and has promoted OIML internationally recognised system
- Introduced electronic data management and reporting system
- Seeking Certification to ISO 9001 : 2015

Question: USA Mr Ralph RICHTER – your slide on the draining of the water of the chickens – you said the industry does really want to comply. We have an issue in the USA where the meat products are intentionally saturated with some kind of sauce or spicy liquid. How do you handle that in NZ?
Response: Mr GUDMUNDSSON – so it is all based on what is represented on the packaging. So if the packaging says chicken and sauce, then that is what you are buying, where if the product is called ‘chicken’ then the consumer’s expectation is they are buying the packaged weight in chicken, and not the fluid. So that is the difference. Some of the packages you get - e.g. ready to cook chickens which come in a sealed bag and you put them straight into the oven; that is a complete item.

Question: Co-Chair Mr MIKI – noted he was curious about the taxi meters, in NZ will taxi meters disappear in the near future?

Response: Mr GUDMUNDSSON – yes that falls under a different Ministry – The Ministry of Transport, but that is what they are proposing, so you would get into a taxi and then negotiate how much it will cost to get from A to B. It is just a proposal at the moment. He advised for a number of reasons Trading Standards is opposed to this proposal and advocated to follow the OIML recommendation to have approved taxi meters and to have a verification system.

10.10 Papua New Guinea – Mr Joe PANGA – Head of Metrology Division PNG NISIT

- Numerous agencies in PNG involved in the enforcement of metrology. The National Institute of Standards and Industrial Technology Coordinates the collaboration of state agencies and departments responsible for legal metrology functions
- PNG is compatibility with OIML procedures
- PNG intends to introduce a National Quality Policy, a Metrology Act and Regulations

10.11 Philippines – Mr Michael SOLIS, Senior Science Research Specialist, Industrial Technology Development Institute

- Developed a *Handbook for Philippine Verifiers and Inspectors on the Verification, In-Service Inspection, and Sealing of Fuel Dispensers*
- Alignment and compliance of Philippines National Requirements with the ASEAN Common Requirements on Prepackaged Products
- To introduce efficient and effective land vehicle speed limit and smoke-emission control
- To develop qualifications of regulators and inspectors

10.12 Singapore – Mr Andrew YAP – Senior Manager, Consumer Protection Weights & Measures, SPRING

- Attended the two meetings of the ASEAN, ACCSQ WG3 in 2016 and actively participated
- Attended training a train the trainer workshop on the control of prepackaged products and the OIML pilot training centre in china
- Developed a technical reference document for ‘Bunker Mass Flowmetering’ which was promoted at the Singapore International Bunkering Conference
- Intend to establish a Technical Committee on Liquid Natural Gas Bunkering and develop a Standard

Comment: Mr Stephen O’BRIEN noted he has always been impressed with the work SPRING Singapore does around developing material for consumers and its consumer awareness, so it is interesting to see your current initiatives in this area.

Question: New Zealand Mr Kevin GUDMUNDSSON asked if the document you developed for the bunkering of fuel, is available on your website.

Response: Mr YAP noted he doesn’t think it is available because this is currently a technical reference, you have to purchase it from Singapore’s standards body. It is available to industry players, but they have to pay a fee.
10.13  Chinese Taipei – Mr Jin-Hai JANG – Technical Specialist, Bureau of Standards, Metrology and Inspection

- New Type Taximeters introduced
- Examinations for Metrological Technical Personnel, 6 examination sessions organised in 2016, to date 2,486 have passed the program since 2010
- The Bureau of Standards, Metrology and Inspection has worked closely with domestic museums and schools to hold 33 activities in 2016 to highlight the use of the SI units
- NML has completed the expansion of Nano Particle Functional Property Measurement System

Question:  Canada Mr Alan JOHNSTON asked if Chinese Taipei uses the OIML R46 to approve water meters or do you have your own standards?

Response:  Mr JANG advised they use ISO 065.

Comment:  Mr O’BRIEN noted he was interested in following the work you are doing with taxi meters. We have been talking this might be a useful topic to discuss through the metrology portal as this issue is changing for a number of economies around the world.

10.14  Thailand – Ms Pattaraporn SURASIT, Senior Professional Level, Bureau of Weights and Measures, Department of Internal Trade, Ministry of Commerce

- Became full member of OIML
- Hosted the MEDEA training course on the verification of fuel dispensers July 2016
- Achieved ISO17025 accreditation for 3 laboratories: Mass, Volumatic and Dimension
- Achieved ISO 17020 for pre-packaged Products Inspection
- Quantity mark in place and 3 manufacturers have been audited and authorised to use it

10.15  United States of America – Mr Ralph RICHTER – Senior Engineer, NIST

- New requirements for taxi meters
- Weigh-in-Motion truck scales installed on highways for screening purposes to select potentially overloaded vehicles for further inspection
- Legal Metrology issues related to alternative fuel vehicles:
  - Compressed and Liquefied Natural Gas
  - Electrical
  - Hydrogen
- Developing the standard firewood measure
- High accuracy weighing equipment required for measuring the legal sale of cannabis

Question:  Australia Mr Anthony DONNELLAN – picking up on the weighing in motion systems for your road vehicles and trucks and you mentioned that at this stage, and there are future plans for trade transactions and commercial use, but at this stage on the screening process, pre-screening before it goes onto a static weighing machine – is US, are such systems to be required to be type approved at this stage, just for the in-motion compliance checking as opposed to a trade transaction?

Response:  Mr RICHTER - The weigh-in-motion scales – his understanding is that just like all weights and measures activities in the US, the regulatory authority is not the Federal Government but the States and what we are using these scales for is to determine over-weight trucks, either for safety issues e.g. they weigh too much to be on the road
or for imposing fines because they are over-weight. The local governments either collect the fine and let them go on, or keep them off the road until they can be unloaded in some way and reduce their weight. So Mr DONNELLAN’s question about the type approval of the systems – the procedures for type evaluation are being worked on, but because the high speed weigh in motion system is not every being used in a way that it is the final word on the weight of the truck, it is only being used as a screening process and the final word on the weight of the truck is back in the static world. So they pull the truck off and weigh it statically and that is the final word on what the truck weighs. So even though we are working on the test procedures and that is definitely the direction we want to go – that these systems would get type approved, he believes they are not current getting type approved.

Comment: Australia Mr Anthony DONNELLAN – He asked that question because we have a number enquiries in Australia for this at the moment and in terms the appropriate state regulators in this space whether they were mandating pattern approval or type approval, so thanks for the answering my question. It is interesting because some firms are wanting that in terms of a quality assurance process and to demonstrate that, yet it is not necessarily something we need to mandate for a whole lot of reasons.

Comment: Mr RICHTER – Definitely both the Government (in this case state government) regulatory people that are operating the static scales, it takes a huge burden off them, because 90% of the trucks don’t have to go onto the static scale and then also it takes a huge burden of 90% of the trucking companies, because they don’t have slow and pull off. These systems tend to be expensive, but once they are implemented it is a win/win.

10.16 Vietnam – Mr TRAN Khac Dien – Deputy Director, VMI

- Celebrated Metrology Day 2016 with a seminar on metrological management
- Workshop on fraud prevention of fuel dispenser manufacturers.
- Workshop on fuel trade of fuel retailers.
- Inspection campaign across the country on jewel retailers and fuel stations
- Signing MOU with Korean partner organization such as KAST and KTC

Comment: Mr Stephen O’BRIEN noted he was interested to see Vietnam is doing work with fuel retailers and manufacturers of fuel dispensers to decrease fraud. Is that in response to a specific issue?

Response: Mr TRAN advised that all the information we can share on this has been done.

10.17 Corresponding Member - Russia – Prof Lev KISSAV – Chief Science Research Specialist, VNIMS

- Federal Agency on Technical Regulating and Metrology is the federal executive body that realizes the functions on rendering state services, administration of public estate in the field of technical regulating and metrology
- Four primary laws of metrology
  1. assurance of measurement uniformity
  2. standardization in the Russian Federation
  3. technical regulation
  4. accreditation in national accreditation system
- National measurement institutes maintains 165 primary standards and 86 Centers of standardization and metrology maintains 12 000 standards of quantity units
- Russia’s Directory has been updated and is now available on the APLMF website
11 23rd Asia-Pacific Legal Metrology Forum Meeting - Full Member Only Session (Friday 25th November)

Minutes of Section 11 of the meeting can be found on the member only area of the website http://www.aplmf.org/documents-available-for-review.html

11.1 Roll Call for Full Member Only Session

11.2 Secretariat Report on 2016 Work Programme


11.4 APLMF Secretariat 2017 Work Programme


11.5 Nominations for Awards

11.6 New APLMF Membership Applications

11.7 Procedure for approval of APLMF Decision Papers and Guide Documents

11.8 Review of Membership Fee Structure
11.9 Draft Strategic Plan

11.10 Draft Working Groups – Guidelines and Operational Processes

11.11 Joint Guide 1: National Metrological Infrastructure

11.12 APLMF Guide on Rice Moisture Measurement

12 Asia-Pacific Legal Metrology Forum cont..d

10.30am – 1pm, Friday, 25 November 2016

Mr Stephen O’BRIEN welcomed corresponding members and guests who have joined us following the member only session earlier this morning. Continued with Economy Reports – see section 10.12 above.

12.1 24th APLMF & WG – Cambodia

Mr Stephen O’BRIEN announced the very good news that Cambodia has confirmed they would be hosting the 24th Asia-Pacific Legal Metrology Forum and Working Group Meetings in 2017.

Ms Vorleaks PEOU, President, National Metrology Center (NMC), noted this was the first time she had attended an APLMF meeting, so it had been helpful to understand format of the meeting. She advised she was seeking permission from their Government to host the meeting in Siem Reap and were working with the Secretariat to secure dates in October 2017.

On behalf of APLMF, Mr Stephen O’BRIEN thanked Cambodia for agreeing to host the 24th Asia-Pacific Legal Metrology Forum and Working Group Meetings and the Secretariat looked forward to working to support your team over the coming months on the successful planning and execution of the meeting.
12.2  25th APLMF & WG – Host

Mr Stephen O’BRIEN noted that we haven’t identified a host for the 25th APLMF & WG Meeting as yet. It will be a significant event as we celebrate 25 years. This is a significant anniversary and we would like to mark this event and capture what has been achieved over this period.

He asked delegates to go back to their economies to discuss possibility of hosting this meeting in 2018 or future meetings.

12.3  Closing remarks by Honorary Chairman

Dr Yukinobu MIKI, Honorary Chairman (representing the Host, Japan) thanked all full members, corresponding members and guests for attending this meeting for gathering to attend the 23rd APLMF meeting. He noted it was Japan’s great pleasure to host this first meeting under Mr Stephen O’BRIEN’s presidency and we have seen he has made a very good start, with a draft 5 year strategic plan and a procedure to finalise documents and discussion papers which will ensure the future prosperity of APLMF. He was pleased visitors could experience many Japanese specialities including earthquakes, snow and today fine weather and a view of Mt Fuji.

He hoped all would enjoy this afternoon’s technical tour of the Fuel Dispensers laboratory of Tatsuno Corporation at Yokohama and wished all safe travels home.

Finally as an NMI Director he thanked all staff for their work to make this meeting a success.

12.4  Closing remarks by President

In closing Mr Stephen O’BRIEN thanked Dr MIKI for his comments.

There is just one more announcement before formally closing the meeting. For those of you who weren’t in the members section session this morning, I want to recognise the fact that we agreed on a number of awards and one of those Awards ‘Dedicated Service’ to APLMF which was given to Mr PU and also to the previous Secretariat. He took the opportunity while we have Mr GUO Su in the room, to really pass on our appreciation as a Forum to Su as part of the previous secretariat and the work he has completed. A certificate for these awards will be presented to the members of the previous secretariat, but it is important to congratulate Su in person and thank you very much from APLMF members.

He thanked Dr MIKI and Dr Tsuyoshi MATSUMOTO and the whole team at NMIJ and METI for providing such the spectacular job you have done in hosting this week’s event. It has been great to experience the various elements of Japanese culture and environment which has been very enjoyable.

He also thanked his secretariat team for their work back in NZ and here Kevin and Alli on the ground in Tokyo.

He wished everyone an enjoyable visit to Tatsuno Corporation and safe travel home.

President, Mr Stephen O’BRIEN formally closed the 23rd APLMF meeting, and thanked all for their attendance and participation.
13 2017 Working Group Action Plans

13.1 Training Coordination

- Develop all topics into Guides and circulate to all APLMF members for final review and comment
- Upload completed Guides to the APLMF website
- Develop trial online training module and establish suitability and demand
- 2017 Proposed Course Schedule (Please refer to APLMF website for updates)

<table>
<thead>
<tr>
<th>Course</th>
<th>Host Economy</th>
<th>Trainers</th>
<th>Schedule</th>
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<tbody>
<tr>
<td>Verification of weighbridges</td>
<td>China</td>
<td>China</td>
<td>September 2017</td>
</tr>
<tr>
<td>Verification of bulk flow meters for petrol and diesel</td>
<td>Thailand</td>
<td>Australia</td>
<td>24-28 July 2017</td>
</tr>
<tr>
<td>Verification and pattern approval of water meters</td>
<td>Malaysia</td>
<td>Australia (?)</td>
<td>2017 (3 days)</td>
</tr>
<tr>
<td>Verification of rice moisture meters</td>
<td>tba</td>
<td>tba</td>
<td>tba</td>
</tr>
<tr>
<td>Joint APMP/APLMF Workshop – Benefits of Metrology</td>
<td>Malaysia</td>
<td>Carmila - convener</td>
<td>22-23 May 2017</td>
</tr>
<tr>
<td>Online training based on survey results</td>
<td>Secretariat</td>
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</table>
13.2 Goods packed by Measure

- Update all Average Quantity Inspection training material to be in line with the newly revised and approved documents controlling package goods:
  - OIML R79 - Labelling requirements for prepackage
  - OIML R87 - Quantity of product in prepackages
- Circulate any updated version of the OIML Guide document for ‘Defining the System Requirements for a Certification System for Prepackages’ to all members of the APLMF
- Continue to work with the scientific metrologist to establish a suitable method for determining the density of a carbonated beverage

13.3 Medical Measurement

- Collecting the Legal Measures Mechanism on Medical Devices in Asia Pacific region
- Objects
  - To understand the legal measures on medical devices in Asia Pacific region
  - To accelerate medical devices put on market among APLMF member economies
  - To address the importance of accurate medical devices to diagnosis and treatment if possible
- Approach
  - Design and disseminate a survey to collect the mechanisms of the legal measures on medical devices in Asia Pacific region

13.4 Metrological Control Systems

- Encourage APLMF member economies to join as members
- Conduct survey on needs and interests to promote metrological control systems of member economies
- Cooperate with WG on Quality Measurements of Agricultural Products to issue the Guide on rice moisture measurements
- Cooperate with China and USA to develop the Guide on application of pressure metrology
- To hold possible seminar on common interest with funding support
- Liaison and coordinate with OIML Advisory Group and OPTC
## 13.5 Mutual Recognition Arrangements

- Continue supporting the development and implementation of the new OIML Certification System (OIML-CS), and not seek to develop a regional system;
- Maximize the participation and contributions of APLMF member economies to the provisional Management Committee (prMC) that will be developing/improving/finalizing all aspects of the OIML-CS in the next 11 months.

## 13.6 Quality Measurement of Agricultural Products

- Plan the next training course on grain moisture measurement. WG calls for host economies in the future. Another policy is recruitment of competent trainees as the trainers. Considering the matured contents, it is encouraged to transfer training activities to a regional or national level, even partly. WG encourages trainees to participate in the next course as assistant trainers.
- Continue to seek comments on the Guide Document on Rice Moisture Measurement. The WG hopes the official version would be uploaded on the APLMF website for the benefit of the member economies.
- Contribute to OIML TC 17/SC 1 and TC 17/SC 8 even after publications of the two new recommendations are published. The WG aims to contribute to harmonize between the activities of OIML and APLMF in agricultural measurements.
- Monitoring activities of BIPM and APMP on grain moisture measurement. They recognize the importance of grain moisture measurement as an important application of scientific metrology.
- Support MEDEA training courses as a CC (Coordination Committee) member.

## 13.7 Utility Meters

- Develop and organize training as per the agreed APLMF training plan
- Follow OIML work related to utility meters and inform APLMF members
### 14 2017 Secretariat Work Programme

- Continue to develop the APLMF website based on member feedback.

- Continue to contact APLMF member economies to update their directory information on legal metrology and contact details. This information will be kept up to date and published on the APLMF website, so it can be a useful reference for member economies and industry.

- Document and consolidate the member comments and suggestions collected during the short workshop held during the 23rd APLMF Working Group meeting. The feedback will be considered by APLMF Secretariat and Executive Committee for possible response.

- Continue to develop and circulate electronic newsletter to be sent to all APLMF members, BIML and secretariats of APMP and Regional Legal Metrology organisations.

- Continue to represent APLMF on MEDEA Development Project Steering Committee and support planned project work stream activities including: Support of training courses, publishing National Metrological Infrastructure (Joint Guide 1), Raising Awareness of Metrology (APMP-APLMF Joint Project 2) and Development and trial of e-learning modules.

- Maintain and strengthen working relationships with OIML, APEC, other international and/or regional organisations: Regional Bodies (SRB) APEC Sub-Committee on Standards and Conformance and Specialist Forum, OIML: Regional Legal Metrology Organisation Round Table and Countries and Economies with Emerging Metrology Systems Advisory Group and Pilot Training Centre and Asia Pacific Metrology Programme