



MEDEA TRAINING IMPACTS SESSION HELD AT THE WORKING GROUP MEETING 24TH APLMF MEETING

1. WHAT ARE YOUR ECONOMY'S TWO KEY PRIORITIES FOR 2018-2022 WITH RESPECT TO THE DEVELOPMENT OF YOUR METROLOGY INFRASTRUCTURE?

	GROUP 1 – Facilitator: Alli Smith Scribe & Presenter: Bill Loizides	
SUMMARY	New or revised metrology legislation Expand existing facilities Control of pre-packaged goods Increase capabilities in flow measurement competencies and APMP partnerships Implement metrology development plan	
Australia	Development of new legislative framework for metrology in Australia	1
	Evolution of legal metrology from trade based field outcomes to Quality Assurance assessment by large stakeholders	
Bhutan	Construction of a Separate Metrology Laboratory building	2
	Increase scope of accreditation in Volume, Temperature and Pressure	
	Legislation Framework constituted	1
Vietnam	Prepare Vietnam's National Quality Infrastructure (NQI) for Industry 4.0. Develop strategies and plans to advance NQI of Vietnam for better management and enterprise competitiveness in the wake of Industrial Revolution 4.0.	
	Work with other ministries in order to bring metrological regulations into different fields and industries such as environmental protections (exhaust), medical equipment (monitoring machine); transport equipment (braking force).	2
Malaysia	Establish testing laboratory for pre-packages	2
	Implement type approval for several other instruments including weighing instruments	
Republic of Korea	Interested in 'Smart Metering'. Korea Smart Metering Forum was founded with a view to manage smart metering data	3



	GROUP 2 – Facilitator: Kim Truscott Scribe Tsuyoshi Matsumoto & Presenter: Michael Solis	
SUMMARY	Respond to technology changes	
Japan	Promotion of entry of private business operators	
	Response to technological innovation and changes in social environment	
Thailand	To submit the government to improve the legal metrology organisation e.g. to be the same level as a department.	
	To implement the system of type approval certification	
Philippines	Revision of Republic Act 9236	
	Transition of the National Metrology Laboratory (NML) to the NMI of the Philippines	
Canada	Thermal Energy Meters	
	GROUP 3 – Facilitator: Phil Sorrell Scribe & Presenter: Joe Panga	
SUMMARY	New Metrology Legislation /Facilities (Revision) Control of Pre-packaged Goods Increased Capabilities - Flow Measurement - Competencies/APMP Partnerships Implementing Metrology Plan (Development Plan)	
New Zealand	Adopt G21 Guidance to introduce a certification system to control pre-packaged goods.	
	Explain use of OIML single certification system as a utilizer	
Singapore	Develop expertise in area of market surveillance and verification of weighing machines instruments and pre-packaged goods	
	Set up for calibration and verification of high capacity flowmeters for bunkering use	
	Review of national legislation	
PR China	Metrology Law – revision	
	Metrology Development Plan - implementation	
PNG	Development of a new metrology act/law	
	New facility/capabilities	
	Regular Collaboration/Meetings with Legal Metrology Stakeholders to harmonise	



	GROUP 4 – Facilitator: Stephen O’Brien Scribe & Presenter: Ralph Richter	
SUMMARY	Review of Legal Metrology Acts and Legislation in each country Implementation of the Re-definition of SI units Better harmonisation of Legal Metrology Authorities - local, national, Asia-Pacific Region - communication and verification activities	
USA	Full implementation of the new SI Units definitions Better harmonisation with international requirements and procedures	
Chinese Taipei	Review on Weights & Measures Acts Renew the primary standards of Mass and Correspond standards	
Indonesia	Revisions of Legal Metrology Law Set up verification offices throughout Indonesia	
Cambodia	To improve the metrology to the core components in participating in the development of industry, service and technology To harmonise national legislation with regional and international norm To strengthening the implementation of Cambodian Metrology law and legislation	

2. LIST 2 KEY IMPACTS OR CHANGES YOUR ECONOMY HAS MADE AS A RESULT OF ATTENDANCE AT MEDEA WORKSHOPS OVER THE LAST 4 YEARS

	GROUP 1 – Facilitator: Alli Smith Scribe & Presenter: Bill Loizides	
SUMMARY	Improvements of legal metrology systems <ul style="list-style-type: none"> • Accreditation and calibration • Prepacks • Training of officers and stakeholders Provision of trainers and expertise	
Australia	Providing Training Coordinator for MEDEA project Providing experts to undertake training in member economies	
Bhutan	Verification of Weights and Measures Calibration Accreditation in Mass and Length	4



Vietnam	Raise the level of technical knowledge of metrological and administer through MEDEA training course on verification of measuring instruments and measurement standards so they can collaborate more effectively with experts for developing technical regulations	4
	Raise the understanding and strategies to develop NQI	4
Malaysia	Consultation and training to industries on pre-package	
	Include pre-package requirement in government order (legislation) but yet to be approved by Parliament	4
	GROUP 2 – Facilitator: Kim Truscott Scribe Tsuyoshi Matsumoto & Presenter: Michael Solis	
SUMMARY	Practical understanding of test procedures Distribution of Knowledge within the region	
Japan	Provision of training materials was a good exercise also for the trainers	
	The programs and materials were utilised for the stakeholders (manufacturers in Japan	
Thailand	Our organisations staff who participated understand and have experience to practice how to test the measurement instruments	
	They contribute the knowledge to other staff in the field of legal metrology	
Philippines	Came up with a guide/handbook on verification of fuel dispensers	
	NML recognised at the key entity and driver of the National Measurement System.	
Canada	n/a	
	GROUP 3 – Facilitator: Phil Sorrell Scribe & Presenter: Joe Panga	
SUMMARY	Increased focus on training and exposure Alternative training materials/methods Enhanced knowledge of recommendations (OIML) Sharing experiences amongst AP economies	
New Zealand	Increase in focus on training, exposure of staff to role of trainer	
	Alternative training materials – e.g. e-learning	
Singapore	Shared relevant weighing machine instruments verification procedures with our designated verifiers	
	Initiated active market surveillance on pre-packaged goods	
PR China	Enhance acknowledge international recommendation	
	Share experience with other	
PNG	Increase Collaboration with stakeholder	



	Improved capability and alignment with Regional/International practices	
	GROUP 4 – Facilitator: Stephen O’Brien Scribe & Presenter: Ralph Richter	
SUMMARY	Revision of national requirements and procedures to match OIML recommendations - including technical reports Train the trainers (multiplier effect) - NAWI - Water Meters - Fuel Dispensers	
Chinese Taipei	Revise the procedure of verification Train the Trainers	
Indonesia	Would like to join OIML CS – NAWI & water meters Revising Technical Regulation – in line with International Recommendation	
Cambodia	Human resource and limited staff Lack of facilities to conduct verification Limited budget from government and lack of standard	

3. LIST ANY SPECIFIC MEASURING INSTRUMENTS OR AREAS OF YOUR METROLOGY SYSTEM WHERE YOUR ECONOMY NEEDS MORE TRAINING.

	GROUP 1 – Facilitator: Alli Smith Scribe & Presenter: Bill Loizides	
SUMMARY	Utility Meters NAWI, AWI, Medical devices, gas meters, regulatory practice training, flow meters	
Australia	N/A	
Bhutan	Pressure and Temperature (calibration and verification) Medical Instruments such as BP measuring instruments and Electricity Meters	
Vietnam	Software management of utility meters, taxi meters, fuel dispensers as well as the situation on smart utility meters Verifications of fuel dispensers, CNG, LPG dispensers Verifications of Utility Meters such as electricity meters, water meters, gas meters Verification of physiochemical instruments and environmental protection such as PH meters	5
Malaysia	Electronic/software testing/validation	3



	Utility Meters (water meter)	5
	GROUP 2 – Facilitator: Kim Truscott Scribe Tsuyoshi Matsumoto & Presenter: Michael Solis	
SUMMARY	Software, electric cars (H2 and LPG Dispensers) and other emerging technologies	
Japan	Automatic Weighing Instruments	
	Software for measuring instruments	
Thailand	Verification of LPG meter in the station (volumetric test)	
	Verification of electric meter and EV station	
	Regulation of parking meters	
Philippines	Speed Cameras	
	Breath analysers	
	Software testing of measuring instruments	
Canada	n/a	
	GROUP 3 – Facilitator: Phil Sorrell Scribe & Presenter: Joe Panga	
SUMMARY	Utility Meter NAWIs AWIs Medical Devices Gas Meters Regulatory Practices Training Flow Meters	
New Zealand	Medical Devices	
	Water Meters	
Singapore	Operations and verification of high capacity flowmeters and measuring systems	
	Verification of weighbridges (not very effective – past training)	
	Weighing machine instruments software – tampering complications and verification methods to defect such practices.	
	Develop effective market surveillance approaches for pre-packaged goods and weighing machine instruments.	
PR China	Metrology in daily life	
	Automatic Weighing Instruments	
PNG	Utility Meters, Gas Measurement (LNG Meters), Weighing Instruments	



	GROUP 4 – Facilitator: Stephen O’Brien Scribe & Presenter: Ralph Richter	
SUMMARY	Dynamic liquid & gas measurement - R117, R137, R139, R49 - both type approval & verification Alternative fuel for vehicles All Utility Meter - Electricity Meters (R46) All instrument categories part of new OIML-CS	
USA	Alternative fuels for vehicles weigh-in-motion systems	
Chinese Taipei	The fields of dynamic measuring systems in liquid	
Indonesia	Flow meters	
	Gas meters	
	Electricity meters	
Cambodia	Water meter and watt meters, taxi for type approval facilitation	

4. HOW CAN YOUR ECONOMY BEST CONTRIBUTE TO THE SUCCESS OF THE MEDEA PROJECT?

	GROUP 1 – Facilitator: Alli Smith Scribe & Presenter: Bill Loizides	
SUMMARY	Provide trainers, experts and resources Implementation of OIML G21 Provide OPTC platform Share knowledge and case studies of implementation of OIML recommendations/regulatory practices	
Australia	Provision of ‘Subject Experts’	6
	Assistance with producing/evolving guides for member economies	
Bhutan	By participating actively in trainings and implement it	
	Become a member of APLMF	
Vietnam	We can provide trainee, location and facilities for training course	



	Share experiences between economies	
Malaysia	Testing on weighbridges trainers as we have the facility	6
Republic of Korea	Share experiences in MI's including EV supply equipment and electricity meter	6
	GROUP 2 – Facilitator: Kim Truscott Scribe Tsuyoshi Matsumoto & Presenter: Michael Solis	
SUMMARY	Keep providing hosting and training	
Japan	We will continue to provide trainers and speakers	
Thailand	The venue for training courses e.g. truck scale testing, grain moisture meter	
Philippines	Coming up with a sustainability plan for the knowledge obtained from the trainings/workshops by MEDEA	
Canada	Where possible training, keeping in mind Canadian requirements are not perfectly aligned with OIML recommendations	
	GROUP 3 – Facilitator: Phil Sorrell Scribe & Presenter: Joe Panga	
SUMMARY	Provide trainers/experts/resources Implementation of OIML G21 Provide OPTC Platform Share knowledge and case studies of implementation of recommendations (OIML) or regulatory practices.	
New Zealand	Provide trainers to help/promote courses and assist with implementation of G21 guidance	
Singapore	Actively implement lessons learned to improve upon our legal metrology regime.	
PR China	Provide trainer /resource	
	OIML Pilot Training Centre (OPTC)	
PNG	-	
	GROUP 4 – Facilitator: Stephen O'Brien Scribe & Presenter: Ralph Richter	
SUMMARY	Hosting – especially facilities Training Skills	
USA	Provide train the trainer training of a general metrology and/or legal metrology nature.	
Chinese Taipei	No input	
Indonesia	Participants	
	Host	
Cambodia	Increasing and strengthening the capacity of technical staff	
	Host	



5. WHAT WOULD YOUR ECONOMY WANT MEDEA TO DELIVER OVER THE NEXT 3 YEARS?

	GROUP 1 – Facilitator: Alli Smith Scribe & Presenter: Bill Loizides	
SUMMARY	Contributions from MEDEA, provide experts for NMI development implementation of the new SI units Introducing a common ‘ mark’ – a regional mark	
Australia	Level of economy expertise in Legal Metrology area to increase	
	Harmonisation of conformity outcomes	
Bhutan	Trainings – capacity building	
	Assist or link member economy – source funds to assist developing member countries (LDC) in infrastructure development.	
Vietnam	To organise new workshop in developing National Metrology Infrastructure in specific areas such as developing policies and technical regulations, supporting SME businesses or in some fields such as healthcare and environmental protection etc.	
	To build a web interface which includes webinar-based workshop courses, databases, learning materials especially on fundamental understanding for legal and scientific metrology such as uncertainty, metrological control, quality insurance system etc.	
	To open new workshop to discuss the role and impact of metrology in era of Industrial Revolution 4.0 especially for Smart manufacturing and smart meters.	5
Malaysia	Continue with the present role – facilitate and funding trainers as needed by less developed economies in this region.	
	GROUP 2 – Facilitator: Kim Truscott Scribe Tsuyoshi Matsumoto & Presenter: Michael Solis	
SUMMARY	Continue training/workshop System for Type Approval	
Japan	Automatic Weighing Machines and software	
Thailand	To train how to establish the system of type approval certification	
	To set the training system for legal metrology	
Philippines	Workshops/Trainings to support compliance to the commitments in APEC and ASEAN	
Canada	More training for developing economies	



	GROUP 3 – Facilitator: Phil Sorrell Scribe & Presenter: Joe Panga	
SUMMARY	Provide experts for NMI Development Implementation of the new SI units Introducing a Common ‘Mark’ – A regional mark	
New Zealand	Explore the use of a recognised, voluntary common acceptable ‘Mark’ in line with G21 guide	
Singapore	Operations and verification of high capacity flowmeters and measuring systems	
	Verification of weighbridges (not very effective – past training)	
	Weighing machine instruments software – tampering complications and verification methods to defect such practices.	
	Develop effective market surveillance approaches for pre-packaged goods and weighing machine instruments.	
PR China	New scope of metrology/ new content emerging issue	
	New International System of Units – reform/Impact/Implementing	
PNG	-	
	GROUP 4 – Facilitator: Stephen O’Brien Scribe & Presenter: Ralph Richter	
SUMMARY	Methods (and stories) to promote legal metrology activities (and budgets) in each country Training opportunities in developed economy	
USA	Helping CEEMS countries further develop their legal metrology infrastructures	
Chinese Taipei	The fields of dynamic measuring systems in liquid	
Indonesia	Study in benefit of legal metrology in economy	
	Continues conducting the trainings according to the needs of members	
Cambodia	Training specific skill	
	Site visit	