

Asia Pacific Metrology Programme

**APMP Report to
APLMF Forum and Working Group Meetings
Siem Reap, Cambodia
25 – 27 October 2017**

Angkor Resort & Conference Hotel

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Governance Updates

- **Dr Toshiyuki Takatsuji (Japan)** has commenced his three-year term as APMP Chair
 - APMP Secretary: **Dr Takehiro Morioka (Japan)**
APMP-secretariat@aist.go.jp
- Election of 1 Executive Committee member:
 - **Ms Gao Wei (China)** 2016-2019.
- 3 new Technical Committee (TC) Chairs taking office:
 - Dr Takashi Shimada (**Japan**), Acting Chair: **Fluid Flow**
 - Dr Victoria Coleman (**Australia**): **Materials Metrology**
 - Dr Jinjie Wu (**China**): **Ionising Radiation**



Governance Updates

- The APMP Mid-year Meeting and related activities were successfully held in Malacca, Malaysia from 21-26 May 2017.



Membership Updates

New Full Members in 2016 and 2017:

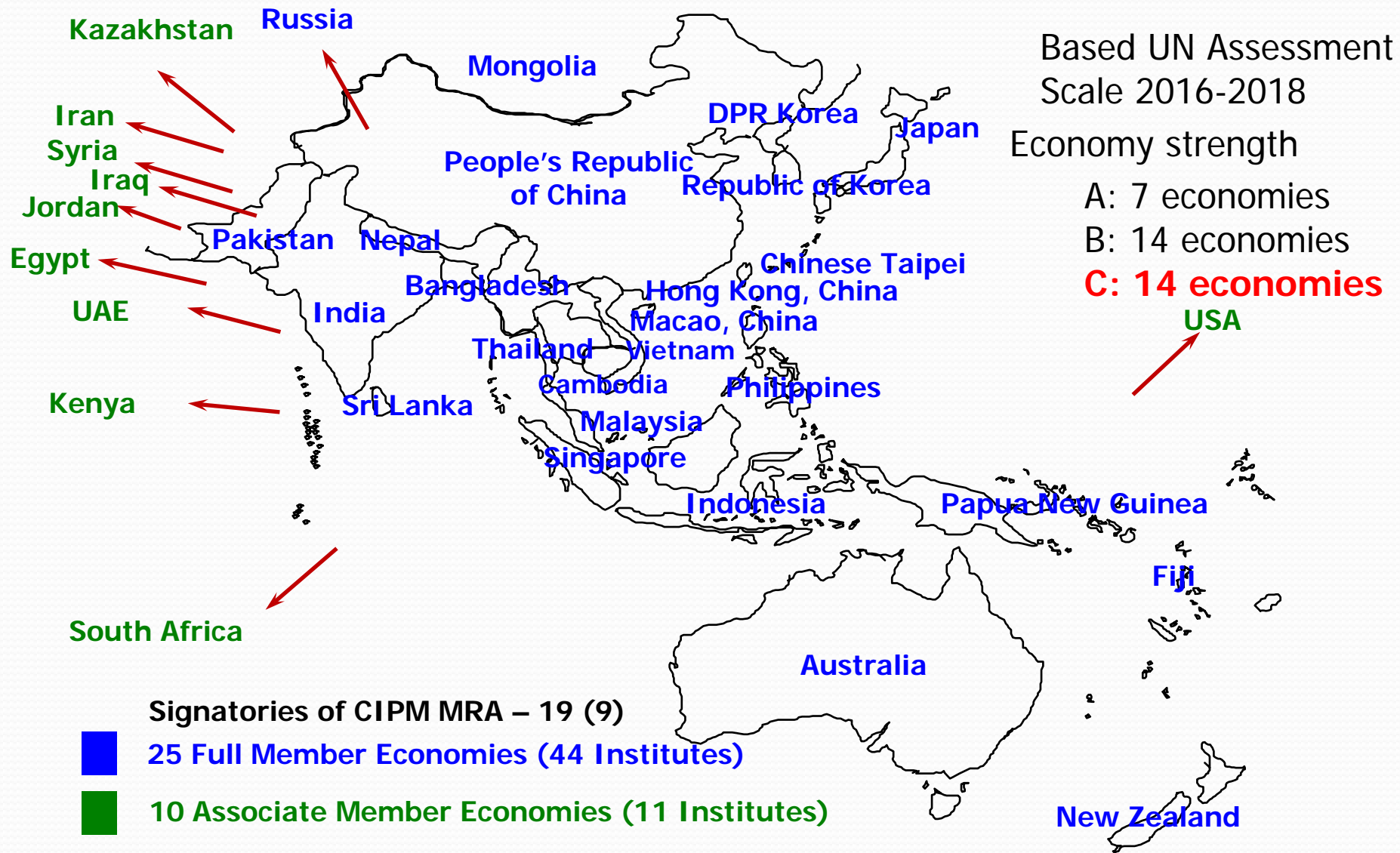
- Central Geological Laboratory of Mongolia (**Mongolia**)
- Department of Chemistry, Malaysia (**Malaysia**)
- National Nuclear Agency of Indonesia (**Indonesia**)
- Public Health Laboratory (**Macao, China**)

New Associate Members in 2016 and 2017:

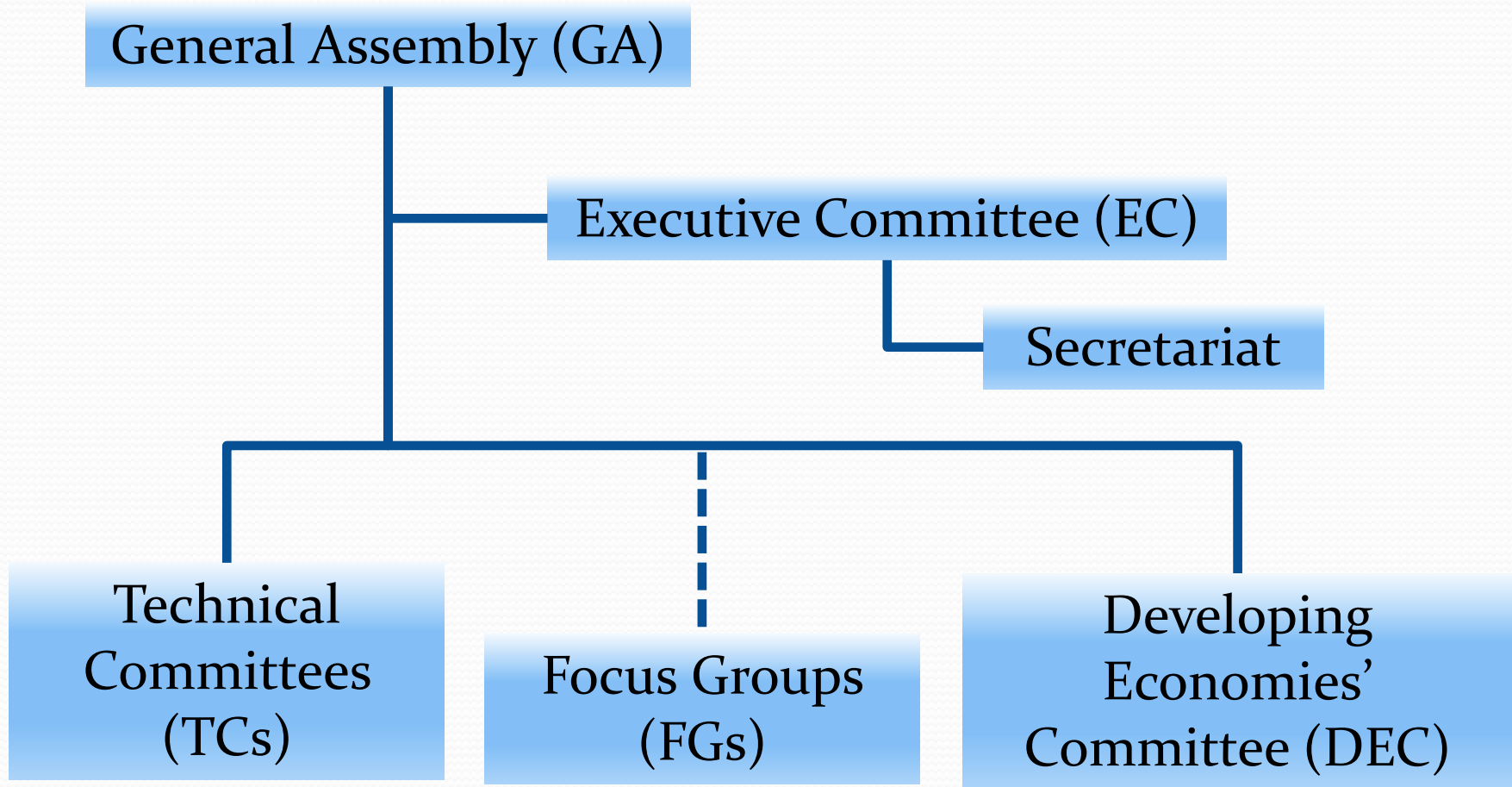
- The Emirates Metrology Institute (**UAE**)
- The National Institute of Standards and Technology (**USA**)
- Central Organization for Standardization and Quality Control (**Iraq**)
- National Metrology Centre of Iran (**Iran, Islamic Republic of**)
- National Physical Laboratory (**United Kingdom**)



Members of APMP



APMP Organization Chart



Technical Committees

- **APMP has 12 Technical Committees.**
 - TCAUV: Technical Committee for Acoustics, Ultrasound and Vibration
 - TCEM: Technical Committee on Electricity and Magnetism
 - TCFF: Technical Committee for Fluid Flow
 - TCL: Technical Committee for Length
 - TCM: Technical Committee for Mass and Related Quantities
 - TCPR: Technical Committee for Photometry and Radiometry
 - TCQM: for Amount of Substance: Metrology in Chemistry and Biology
 - TCQS: Technical Committee for Quality System
 - TCRI: Technical Committee for Ionizing Radiation
 - TCT: Technical Committee for Thermometry
 - TCTF: Technical Committee on Time and Frequency
 - TCMM: Technical Committee of Materials Metrology



Strategic Developments

TC Initiatives: The APMP TC Initiatives budget is aimed at fostering R&D projects of significance in addressing current needs of industry.

Five TCI proposals have been approved for 2017:

- Pilot study of Foil (film) thickness measurements with applications for semi-conductor and electronics industries
- Calibration of relative humidity sensors (10%-95% RH) at nominal temperatures 5°C, 23°C and 50°C
- International comparison of moisture measurement for solid materials
- Applying acoustics, ultrasound, and vibration measurement to intelligent machines for Industry 4.0
- Research on laboratory standard microphone calibration (10Hz-20Hz)



Strategic Developments

“Focus Group” (FG) strategy:

Aimed at developing capabilities and increasing impact of measurement in addressing regional challenges in support of government, industry, innovation and research. APMP has 5 Focus Groups:

- **Energy Efficiency** (Mr Uthai Norranim, NIMT, Thailand, uthai@nimt.or.th)
 - **Food Safety** (Professor Li Hongmei, NIM, China, lihm@nim.ac.cn)
 - **Medical Metrology** (Dr Sheng-Jui Chen, CMS/ITRI, Chinese Taipei, SJ.Chen@itri.org.tw)
 - **Climate Change and Clean Air** (Dr Jin Seog Kim, KRISS, Korea, jkim@kriss.re.kr)
 - **Clean Water** (Dr Mego Pinandito, KIM-LIPI, Indonesia, mego@kim.lipi.go.id)
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- FG Workshops were successfully held with the 2016 annual APMP meetings in November 2016.
 - **APMP FGs seek to engage with regional forums, including within APEC, to develop solutions on issues of mutual concern.**



Energy Efficiency Focus Group Activities

Contact: uthai@nimt.or.th

The Energy Efficiency Focus Group is working on the following projects:

- Reducing green house gas (GHG) emissions
 - Decarbonising power generation
 - Providing energy efficiency solutions for energy intensive industries
 - Assisting with the development of “green building” technology
 - Renewable energy
-
- Energy Efficiency Workshops were held in conjunction with the APMP GA 2016
 - Metrology and energy efficiency in buildings
 - Metrology and energy efficiency in energy intensive industry
 - Solar energy and future collaboration



Food Safety Focus Group Activities

Contact: lihm@nim.ac.cn

- In November 2016, the APMP Food Safety Focus Group held a successful Food Safety Workshop in collaboration with APEC entitled *APEC Regional Workshop on Measurement and Standards for Grain Food Safety and Free Trade*.
- The workshop discussed:
 - Regulation
 - Standards
 - Traceability in chemistry
 - Testing methods
 - PT activities on mycotoxins and heavy metals in grain food.
- Survey of capabilities in food safety measurement in the Asia-Pacific region
- Proposed workshop on sampling procedures, evaluation of screening methods, and metrological traceability assurance.



Medical Metrology Focus Group Activities

Contact: SJ.Chen@itri.org.tw

Scope

- Support the whole value chain (from R&D design, to manufacturers and to end users)
- Setup international equivalence on medical measurements
- Traceability of medical devices and diagnostics
- Share mutual experience among NMIs, DIs and TCs

Develop collaborations on:

- Bone density measurement
- Blood pressure measurement

Proposed workshop on non-invasive blood pressure (NIBP) measurement

- New standards for NIBP simulators are being drafted. The Medical Metrology Focus Group can assist with the development of relevant technology and instruments and perform preliminary studies.



Climate Change and Clean Air

Focus Group Activities

Contact: jkim@kriss.re.kr

Scope:

- Metrology for climate change and clean air: calibration of instruments and sensors related to stack emission and background measurement.

Objectives:

- To support national measurement standards related to climate change and air quality, including as, aerosol, flow, temperature, and humidity.

Workshop held in conjunction with APMP 2016:

- Chemical metrology for climate change
- Physical metrology for climate change
- Sensor development and remote monitoring



Metrology for Clean Water

Focus Group Activities

Contact: nurul@kim.lipi.go.id

Scope:

- Metrology for Clean Water Focus Group (CWFG) focuses on the metrological parameters related to clean water metrology and discusses the current issues in the field of clean water availability including the national and regional needs and capabilities.

Objectives:

- To develop measurement technique/method as well as traceability necessary for correct determination of water quality and water balance
- To develop methods for the monitoring of water quality and the improvement of water quality (water treatment)
- To give a strategic advice in overcoming water problems
- To share experience of cooperation between NMI and water company, how the process in drinking water company, and quality assurance for clean water.

First Meeting and workshop was held from 19 and 20 September 2017 in Bogor, Indonesia:

- Symposium, Focus Group meeting, Workshop and technical visit



Support for Developing Economies

APMP Mid-Year Meetings, Malaysia, 22-26 May 2017:

- Always held in developing member economy
- Strategic and governance meetings of APMP's Executive Committee, Technical Committee Chairs and Developing Economies Committee (DEC)
- Technical Workshops
- DEC-MEDEA* Workshops

KRISS (Korean Research Institute of Standards and Science) Global Metrology Academy:

<http://gma.kriss.re.kr/jsp/program.jsp>

- Metrology in General
- Flow Measurement and Calibration
- Ionizing Radiation
- Mass and Related Quantities
- Length and Dimensional Measurement
- Thermometry and Humidity



Support for Developing Economies

German Government funded project to develop capability in legal and scientific metrology in Asia-Pacific economies (MEDEA* Programme)

APMP-specific activities include training workshops in:

- Support for participation in global CIPM MRA
- Strategy and performance management
- Specific technical trainings
- Attachment trainings

**MEDEA: Metrology: Enabling Developing Economies within Asia – 4-year joint (APMP & APLMF) capacity building project of Physikalisch-Technische Bundesanstalt (PTB), Germany*

Global Capacity Building & Knowledge Transfer (CB&KT) Programme (*initiative of the International Bureau of Weights and Measures, BIPM*)

- 2016 and 2017 workshops to assist participation in CIPM MRA.
- The national metrology institutes of China and South Africa are working with the BIPM on the “Metrology for Safe Food and Feed in Developing Economies” capacity building project.



APMP's APEC Linkages

- APMP's linkages with Asia Pacific Economic Cooperation (APEC)
 - February 2016 meetings of APEC Sub-Committee on Standards and Conformance (SCSC) and Specialist Regional Bodies (SRBs)* Forum
 - Presentation at August 2016 SCSC *11th Conference on Standards and Conformance*.
 - APEC-funded Food Safety Workshop held with the annual APMP 2016 meetings in November in Vietnam.
 - APMP continues to represent SRBs in APEC's Food Safety Cooperation Forum's Partnership Training Institute Network (FSCF PTIN)
- *APEC SRBs: APLAC, APLMF, APMP, PAC, and PASC*
- APMP-APLAC Cooperation (Joint PT WG), meeting in November 2016:
 - PT programs for 2015/16 (food safety)
 - Elements in food supplements
 - Organochlorine pesticides in ginseng root
 - Determination of iron and zinc in wheat flour
 - Cadmium in milk powder



The 33rd APMP GA and Related meetings 2017

**APLAC-APMP PT WS
will be held on 26 Nov. 2017**



**CSIR-National Physical Laboratory
New Delhi, India
24 November – 1 December 2017**





Thank You

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