



# **Asia Pacific Metrology Programme**

**APMP Report to COOMET  
April 2019**

**Dresden, Germany**

# Membership Updates

APMP welcomes:

New Full Member in 2018:

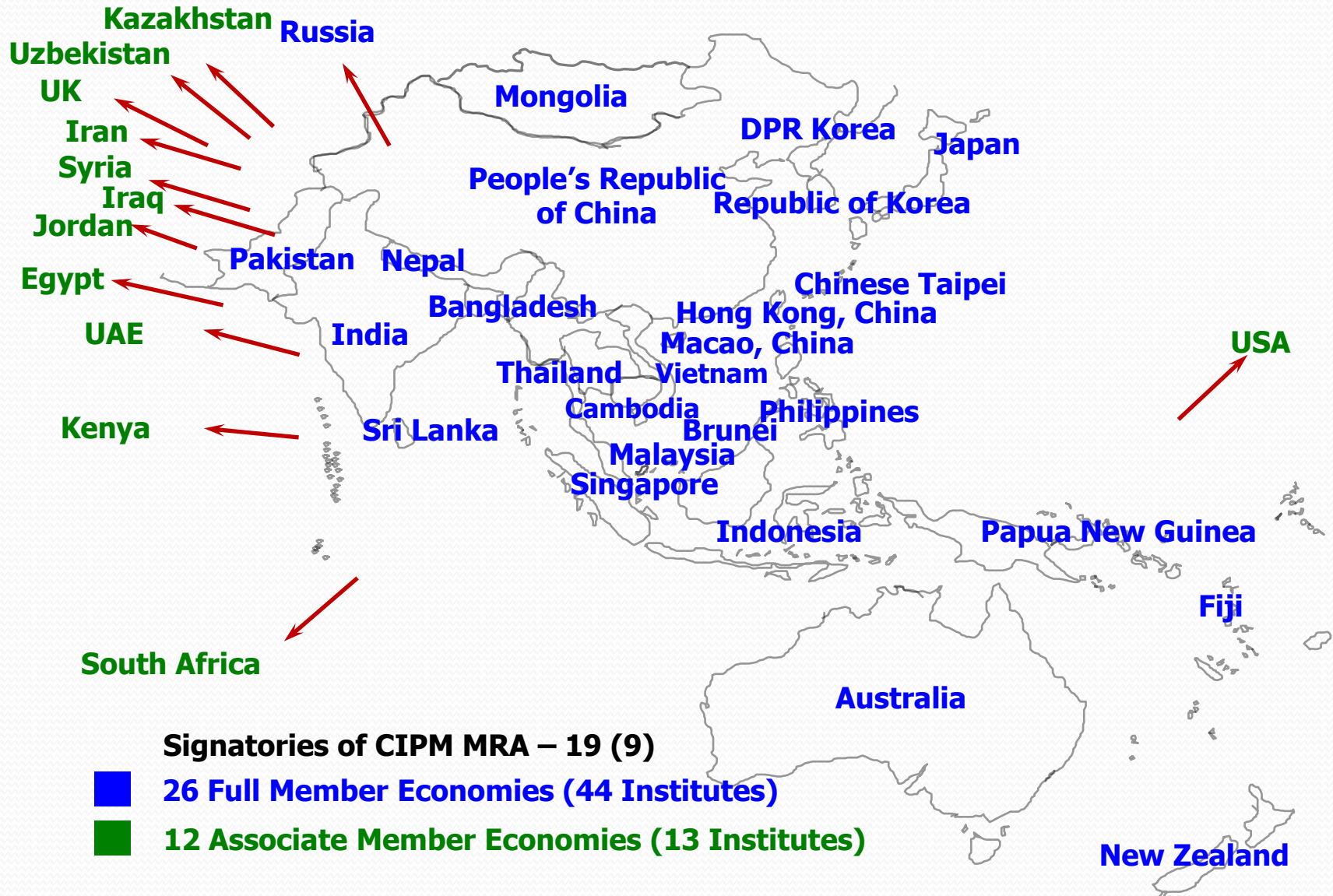
- Measurement Standards Laboratory, **Brunei Darussalam**

New Associate Member in 2019:

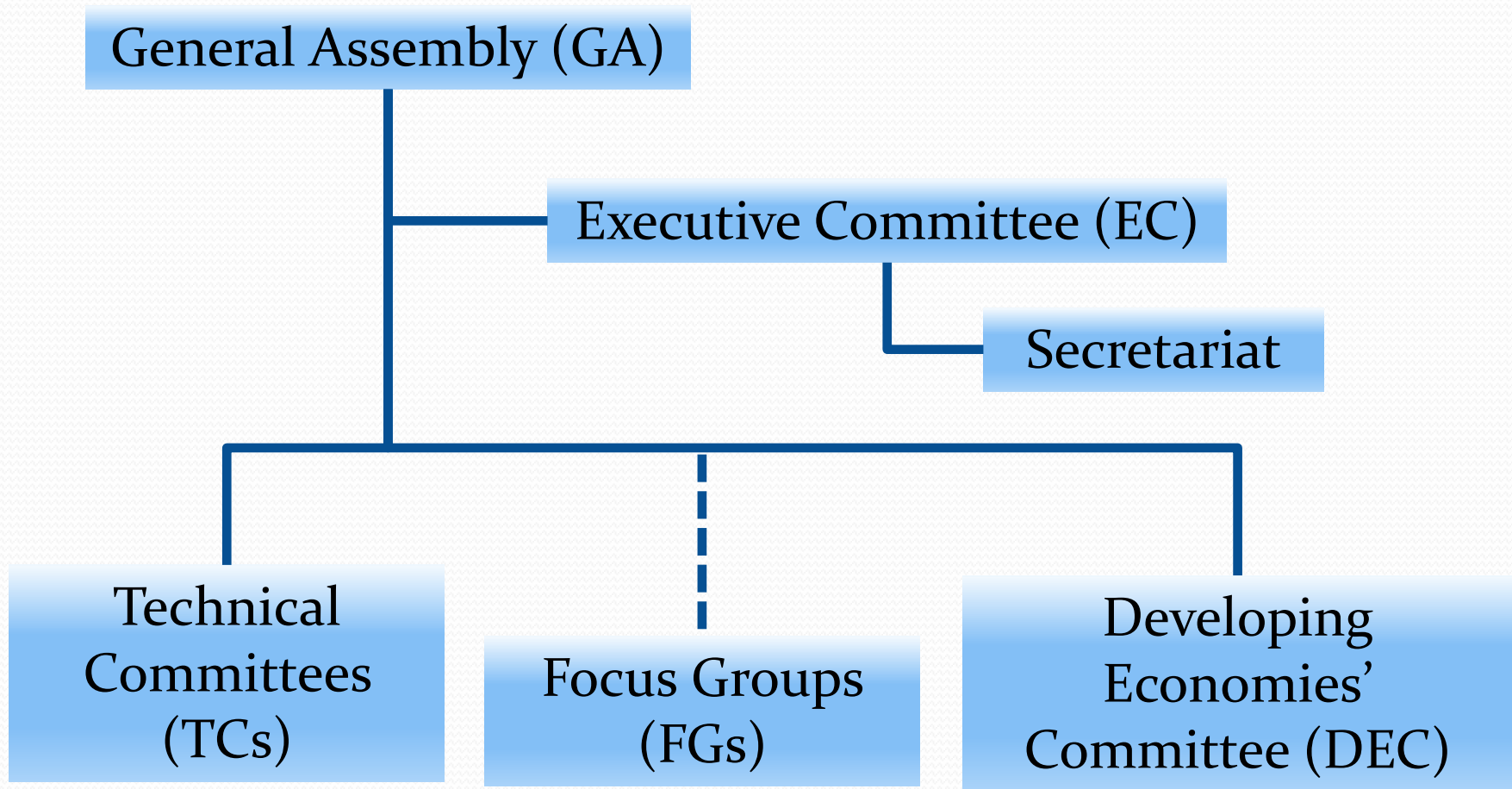
- Uzbek National Institute of Metrology, State Enterprise, **Republic of Uzbekistan**



# Members of APMP



# APMP Organization Chart



# Governance Updates

The APMP General Assembly and Related Activities 2018 were held in Singapore from 20 to 30 November 2018.

- APMP Chairperson-elect:  
Mr Xiang Fang, **China**, 2019-22
- Extension of term; 2 Executive Committee members:  
Dr Osman Zakaria, **Malaysia**: 2018-19  
Dr Yu-Ping Lan, **Chinese Taipei**: 2018-19
- New Executive Committee member:  
Ms Ajchara Charoensook, **Thailand**: 2018-21



7 new TC and DEC Chairs taking office:

- **AUV**: Dr Ryuzo Horiuchi, **Japan**
- **EM**: Dr Hyung-Kew Lee, **Korea**
- **M**: Dr Sheng-Jui Chen, **Chinese Taipei**
- **PR**: Dr Haiyong Gan, **China**
- **QM**: Dr Kazumi Inagaki, **Japan**
- **QS**: Dr Kazuaki Yamazawa, **Japan**
- **T**: Dr Inseok Yang, **Korea**
- **DEC**: Dr Angela Samuel, **Australia**



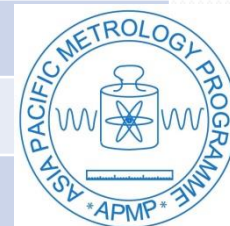
# Executive Committee

Name	Lab	Economy
Toshiyuki Takatsuji	NMIJ	Japan
Osman Zakaria	NMIM	Malaysia
Yu-Ping Lan	CMS, ITRI	Chinese Taipei
Wei Gao	NIM	China
Jan Herrmann	NMIA	Australia
Yon-Kyu Park	KRISS	Korea
Xiang Fang	NIM	China
Ajchara Charoensook	NIMT	Thailand



# Technical Committees

TC	Name	Lab	Economy	Corr. CC
Lead TC Chair	Chu-Shik Kang	KRISS	Korea	
TCAUV	Ryuzo Horiuchi	NMIJ, AIST	Japan	CCAUV
TCEM	Hyung-Kew Lee	KRISS	Korea	CCEM
TCFF	Takashi Shimada	NMIJ, AIST	Japan	CCM, WGFF
TCL	Jariya Buajarern	NIMT	Thailand	CCL
TCM	Sheng-Jui CHEN	CMS/ITRI	Chinese Taipei	CCM
TCMM	Victoria Coleman	NMIA	Australia	N/A
TCPR	Haiyong Gan	NIM	China	CCPR
TCQM	Ma Liandi	NIM	China	CCQM
TCQS	Kazuaki Yamazawa	NMIJ, AIST	Japan	N/A
TCRI	Jinjie Wu	NIM	China	CCRI
TCT	Inseok Yang	KRISS	Korea	CCT
TCTF	Aimin Zhang	NIM	China	CCTF





# Strategic Activities

**TC Initiatives:** APMP funds R&D projects of significance in addressing current needs of Asia Pacific industry. Proposals approved for 2019:

- **Fluid Flow:** Research on the micro liquid flow standard system and inter-comparison
- **Ionizing Radiation:** Research on the calibration of environmental radiation survey meters
- **Temperature:** Improving measurement techniques at the silver freezing point (961.78°C) and validation of the equivalence of the APMP linkage to the CCT-K4
- **Time & Frequency:** BeiDou time transfer and its system time traceability to UTC in Asia

**Focus Group Strategy:** Aimed at developing capabilities and increasing impact of measurement in addressing regional challenges across priority sectors:

- **Energy Efficiency :** *Chair - Thailand*
- **Food Safety :** *Chair - China*
- **Medical Metrology :** *Chair – Chinese Taipei*
- **Climate Change and Clean Air :** *Chair – Republic of Korea*
- **Clean Water :** *Chair – Indonesia*

APMP FGs seek to engage externally including with APEC forums active in these sectors.





# Clean Water Focus Group Activities

*Contact: [ghufron@bsn.go.id](mailto:ghufron@bsn.go.id)*

- **Vision**

- To be part of solution for the adequate availability of clean water for mankind.

- **Missions:**

- To establish cooperation among NMIs in this specific field
- To share experience of cooperation between NMIs and stakeholders (water companies, decision making institution)
- To provide strategic advice in overcoming (clean) water problem to stakeholders
- To improve NMI capability related to clean water parameter
- develop measurement technique/method as well as traceability necessary for correct determination of: water quality & water quantity

- **APMP CWFG Planning Workshop**

- To discuss and understand more on the requirement of clean water based on international standards as well as member economy-specific problems and standards.



# Climate Change and Clean Air

## Focus Group Activities

**Scope:** *Contact: [slee@kriss.re.kr](mailto:slee@kriss.re.kr)*

- Metrology for climate change and clean air with respect to direct driving factors (calibration of instruments and sensors related to stack emission, ambient and background measurement)

### Objectives:

- To support national measurement standards related to climate change and air quality (e.g., aerosol, flow, temperature, and humidity)
- To exchange information on how to support the acting body for member economy inventory by NMI (measurable, reportable, verification)

### Workshops:

- Nov 2017 at Dew Delhi, India: Metrology, Techniques and Strategy
- Nov 2018 at Singapore: New Technology and Strategy for Sustainable Growth and Liveable Environment (environmental monitoring, sensor development, climate change and clean air policy)



# Energy Efficiency Focus Group Activities

**Contact:** [ajchara@nimt.or.th](mailto:ajchara@nimt.or.th), [oijai@nimt.or.th](mailto:oijai@nimt.or.th), [iro@nimt.or.th](mailto:iro@nimt.or.th)

## Objectives :

- ❖ To increase the awareness of energy efficiency measurement.
- ❖ To improve knowledge of regional and national needs on energy measurement area.
- ❖ To explore relevant APMP capabilities and research on energy measurement.
- ❖ To engage more participants from NMIs, energy stakeholders, manufacturers and users.



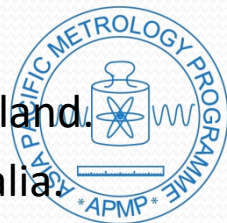
Energy Security

Green Building

Metrology for Energy Efficiency

## EEFG Activities

- ❖ 3<sup>rd</sup> EEFG Workshop on “**Metrology for Energy**” on 24 November 2018, Singapore, Energy topics: Green buildings, EV charging facilities, Flow metrology, Solar PV & LED, RF and microwave, and Impact of metrology on energy in Singapore, Indonesia, Australia and Thailand.
- ❖ 41 Participants from 16 NMIs, stakeholders and manufacturers.
- ❖ **Smart Energy Technology ASIA 2019 (SETA2019)** on 10 - 12 October 2019, Thailand.
- ❖ 4<sup>th</sup> EEFG Workshop on “**Energy for Sustainable Future**”, in 2019, Sydney, Australia.



# Food Safety Focus Group Activities

*Contact: [lihm@nim.ac.cn](mailto:lihm@nim.ac.cn)*

- Nov 2018: The 3rd Expert Meeting on “Trade Facilitation through an APEC Framework on Food Safety Modernization” under **APEC SCSC**
  - **Theme:** APEC Food Safety Modernization Framework to Facilitate Trade
  - **Centers on** Current status and practical steps to facilitate the uptake of the APEC food safety modernization framework to improve public health and assist trade; how to finalise this Framework; how to progress the APEC Food Safety Modernization
- Lancang-Mekong Cooperation Workshop on Prioritized Fields of Metrology
- **The Metrology for Food Safety Workshop** as part of the ASEAN NEXT 2018 is hosted by MOST and organized by NIMT Thailand. The workshop was held from 19-22 March 2018 in Bangkok Thailand.
- Africa Food Safety Workshop 2018: co-organized by NMISA, NIM, BIPM and IAEA in Pretoria, South Africa
- Sept 2018, The “Metrological approach on mycotoxins measurements” Regional Workshop & SIM Chemical Metrology Working Group Meeting
- Oct 2018, The Central Asia and Eastern Europe Training workshop on Food Safety Measurement Standards



# Medical Metrology Focus Group Activities

*Contact: [SJ.Chen@itri.org.tw](mailto:SJ.Chen@itri.org.tw)*

- **Scope**

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

- **Objectives:**

- Development of medical metrology technique, instruments, and facilities
- Develop and Calibrate procedures for medical devices

- **4<sup>th</sup> APMP MMFG Workshop 2018**

- Status of MMFG FGI Project
- Developments at NMIs in medical metrology areas
- Future strategy and work plan





# Revision of SI: WMD Poster

Revision of SI - Implications  
for science, industry &  
stakeholders



Nov-2018 Resolution at the CGPM  
20-May-2019 Revised SI takes effect

## World Metrology Day 2019, Poster



Design: cooperation with Standard  
Calibration Laboratory, Hong Kong, China  
and WMD Team

# MEDEA 2.0

## Metrology – Enabling Developing Economies in Asia

- **Key data of MEDEA 2.0**
- Project Period: May 2018 – April 2021
- Budget: 1.3 Mio. EUR
- Funding: Federal Ministry for Economic Cooperation and Development, Germany
- Implementation: PTB, Germany

### THREE INTERVENTION AREAS

#### Sustainability

Sustainability Concepts

#### Regional Cooperation

CABUREK: Regional Trainers

#### Technical Training

Legal & Industrial/Scientific Metrology



MEDEA 2.0 JOINT PROJECT PLANNING WORKSHOP  
4th to 5th July 2018, Hong Kong



CABUREK 1st WORKSHOP  
30th Oct. to 1st Nov. 2018, Bangkok



# Support for Developing Economies

- Developing Economies' Committee (DEC) activities
  - Needs analysis –MEDEA with Lead TC Chair and FG Chairs
  - MEDEA Knowledge Management System (KMS):  
DEC Working Group
  - Focus Group Awareness Raising Workshop

## APMP DEC-CBKT Programme

### "Leadership training"

- ❖ NIMT, Thailand hosted the APMP DEC Leadership Training 2017 in December 2017

### "Sound Beginning in the CIPM MRA" Workshop

- ❖ MASM, Mongolia to host the workshop in 2019

**BIPM's Capacity Building & Knowledge Transfer (CBKT) Programme** is to increase the effectiveness with which Member States and Associates engage in the world-wide coordinated metrological system.

- ❖ 2016 and 2017 BIPM's CBKT workshops to assist NMIs' participation in CIPM MRA.

## APMP Guidelines for using a Hybrid Comparison Scheme as Evidence Supporting CMC Claims

- Long time intervals between international comparisons
- No such comparisons for some simple calibration services
- Developing NMIs
  - Wish to participate in bilateral comparisons
  - Face challenges in identifying partners
- Developed NMIs
  - Already have to participate, on a voluntary basis, in numerous intercomparisons as link labs
  - Derive limited benefit from bilateral comparisons with developing NMIs
- Response: Hybrid Comparison Scheme

APMP approach accepted internationally  
(at JCRB and CC President Meetings)

# APMP Mid-Year Meeting 2019



**Cebu, Philippines**  
**17-21 June 2019**





# Thank You

**APMP Secretariat**  
**National Metrology Institute of Japan**  
**[APMP-secretariat@aist.go.jp](mailto:APMP-secretariat@aist.go.jp)**