



Asia Pacific Metrology Programme

APMP Report to 28th Meeting of COOMET Committee

**GAO Wei
APMP Treasurer**

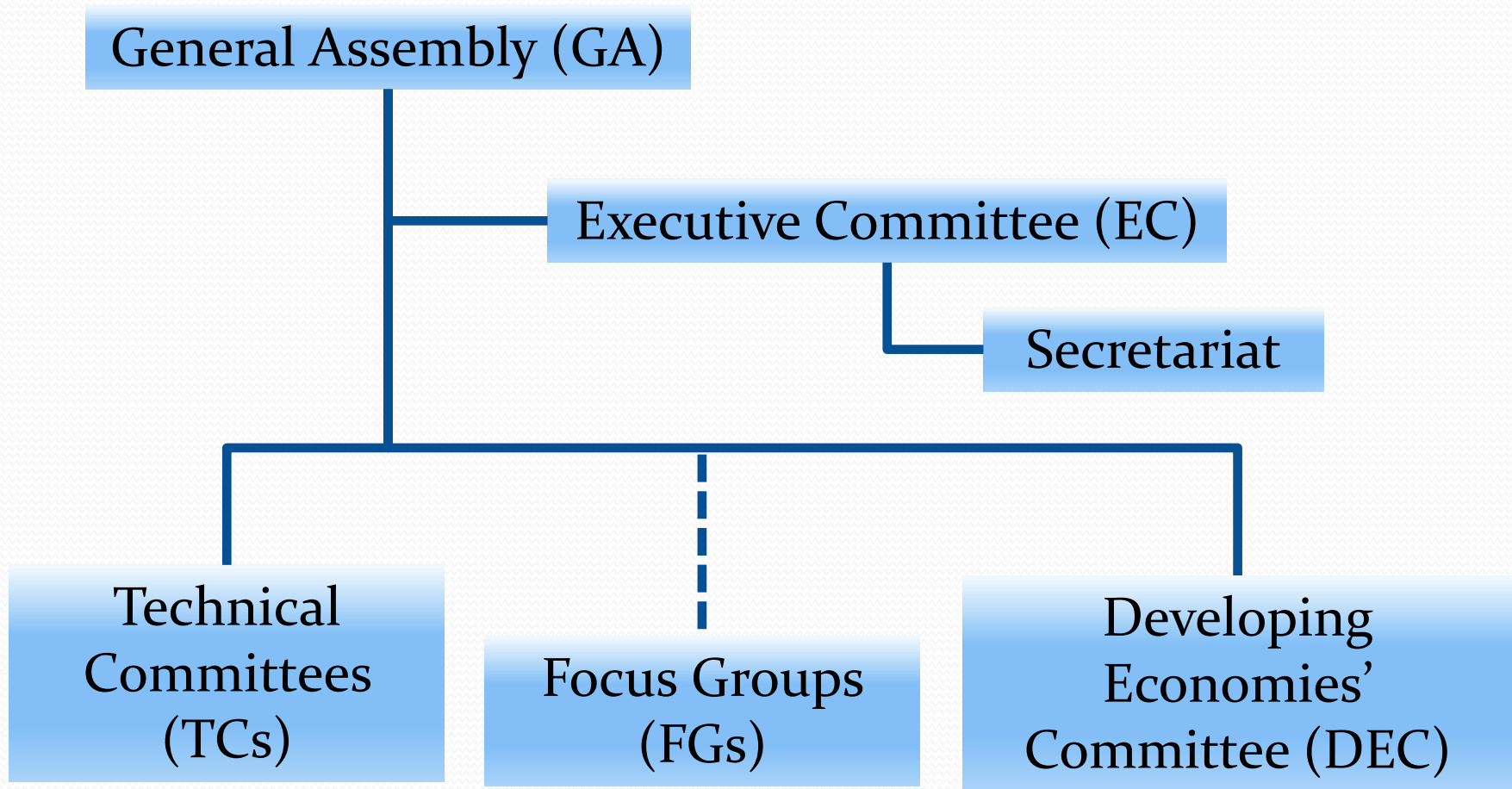
**11-12 April, 2018
Sarajevo, Bosnia and Herzegovina**

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APMP Organization Chart



Governance Updates

The APMP General Assembly and Related Activities 2017 were held in New Delhi, India from 24 November -1 December 2017.

- Election of 2 Executive Committee members:
 - Dr Jan Herrmann, **Australia**: 2017-2020
 - Dr Yon-Kyu Park, **Republic of Korea**: 2017-20
- New Lead Technical Committee (TC) Chair:
Dr Chu-Shik Kang, **Republic of Korea**, 2017-20



3 new TC Chairs taking office:

- **Fluid Flow**: Dr Takashi Shimada, **Japan**
- **Length**: Dr Jariya Buajarern, **Thailand**
- **Time & Frequency**: Prof Aimin Zhang, **China**



Executive Committees

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



Technical Committees

TC	Name	Lab	Economy	Corr. CC
Lead TC Chair	Chu-Shik Kang	KRISS	Korea	Corr. CC
TCAUV	Yu Chung Huang	CMS, ITRI	Chinese Taipei	CCAUV
TCEM	Murray Early	MSL	New Zealand	CCEM
TCFF	Takashi Shimada	NMIJ, AIST	Japan	CCM, WGFF
TCL	Jariya Buajarern	NIMT	Thailand	CCL
TCM	Shih Mean Lee	NMC, A*Star	Singapore	CCM
TCMM	Victoria Coleman	NMIA	Australia	N/A
TCPR	Tatsuya Zama	NMIJ, AIST	Japan	CCPR
TCQM	Ma Liandi	NIM	China	CCQM
TCQS	Isao Kishimoto	NMIJ, AIST	Japan	N/A
TCRI	Jinjie Wu	NIM	China	CCRI
TCT	Li Wang	NMC, A*Star	Singapore	CCT
TCTF	Aimin Zhang	NIM	China	CCTF



Membership Updates

New Full Members in 2017 and 2018:

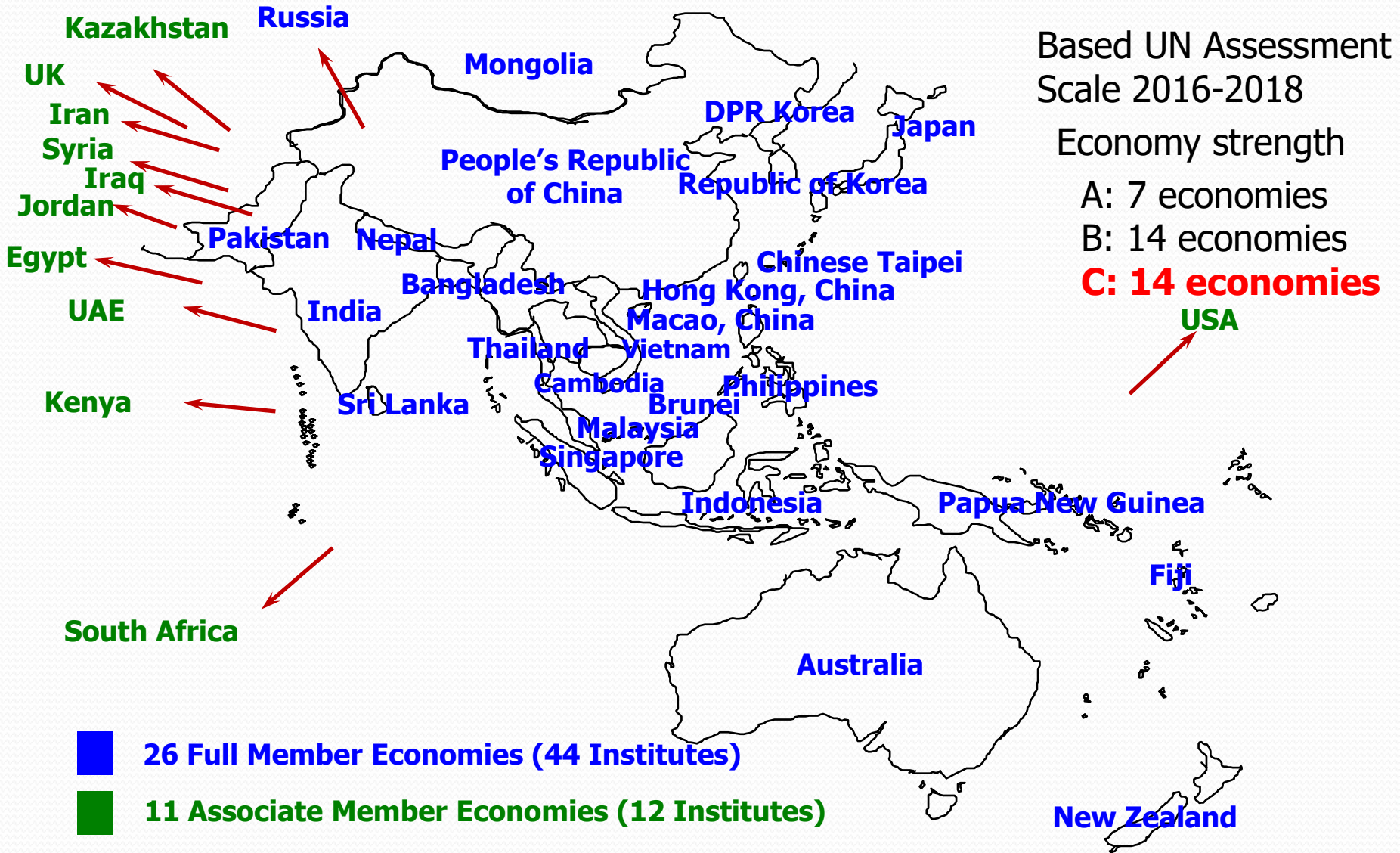
- National Nuclear Energy Agency of **Indonesia**
- Public Health Laboratory, **Macao, China**
- Measurement Standards Laboratory, **Brunei Darussalam**

New Associate Members in 2017:

- National Metrology Center of **Iran**
- Central Organization for Standardization and Quality Control, **Iraq**
- National Physical Laboratory, **UK**



Members of APMP



Participation in Meter Convention and CIPM-MRA

Economy	Lab	M.C.	MRA	DI
Australia	3	✓	✓	2
Bangladesh	2	(✓)	✓	1
Brunei	1			
Cambodia	1			
China	1	✓	✓	1
Chinese Taipei	3	(✓)	✓	3
DPR of Korea	1			
Fiji	1			
Hong Kong, China	2	(✓)	✓	1
India	2	✓	✓	1
Indonesia	2	✓	✓	
Japan	4	✓	✓	3
Korea	1	✓	✓	

Economy	Lab	M.C.	MRA	DI
Macao, China	1			
Malaysia	3	✓	✓	2
Mongolia	2	(✓)	✓	
Nepal	1			
New Zealand	1	✓	✓	
Pakistan	1	✓	✓	
Papua New Guinea	1			
Philippines	1	(✓)	✓	1
Russia ^{*)}	1	✓	✓	7
Singapore	2	✓	✓	1
Sri Lanka	1	(✓)	✓	
Thailand	4	✓	✓	6
Vietnam	1	(✓)	✓	

^{*)} Russian MRA Signatory is Rosstandart.

MEMBERSHIP FEES Structure

	Membership fee For Principal NMI (US\$)			Membership fee For Designated Institute (US\$)		
	Economic Strength			Economic Strength		
	A	B	C	A	B	C
Established Member	12000 (2)	6000 (4)	3000 (6)	2400 (2)	1200 (4)	600 (6)
Developing Member	2400 (1)	1200 (3)	600 (5)	600 (1)	600 (3)	600 (5)

Strategic Activities

TC Initiatives: APMP funds R&D projects of significance in addressing current needs of Asia Pacific industry. Proposals approved for 2018:

- **Ionizing Radiation:** Research on the calibration of ionizing chamber and semiconductor detector for mammography
- **Fluid Flow:** Research on the flue gas S type Pitot tube and 3D Pitot tube calibration method and inter-comparison under different flow conditions
- **Time & Frequency:** Comparison of stopwatch calibration methods

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.

Energy Efficiency Focus Group Activities

Contact: iro@nimt.or.th

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

- **Energy Security**
 - Electricity
 - Oil and Gas
 - Solar Cells
 - Wind Power
- **Green Buildings**
 - Insulation
 - LED
 - Chiller Efficiency
- Supporting the energy sector and high energy consumption industries
- Disseminating accurate measurement for energy efficiency



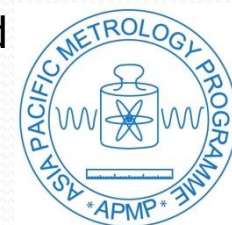
Food Safety

Focus Group Activities

Contact: lihm@nim.ac.cn



- Feb 2017 presentation by Chair of Food Safety Focus Group (FSFG) to **APEC SCSC I** on ***APEC Regional Workshop on Measurement and Standards for Grain Food Safety and Free Trade.***
- May 2017, presentation by Chair of FSFG to **APEC FSCF** on ***Metrology Capacity Improvement and Quality Assurance of Measurement Results in Food Safety***
- Oct 2017, ***APEC Workshop on Capacity Building of Measurement Standards and Technologies in Grain Food Safety*** held in Beijing, China. Topics included: governmental surveillance of food safety, mycotoxin measurement techniques and certified reference materials
- Nov 2017, India: FSFG meeting. Topics included enhancing participation in technical activities and leadership skills, linkages with APLAC in proficiency testing activities
- July 2018, Africa Food Safety Workshop, topics including: analysis and control of mycotoxins, veterinary drugs and pesticide residues, food microbiology, food traceability, and authenticity



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)
- 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

- **3rd APMP MMFG Workshop 2017**

- Metrology for blood pressure
- Metrology for bone density and radiation based medical imaging
- Medical metrology in various fields



Climate Change and Clean Air

Focus Group Activities

Contact: slee@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 gas, aerosol, flow, temperature, and humidity.

Workshop held in conjunction with APMP 2017:

- Metrology, techniques, and strategy
- Providing pilot studies for emerging NMIs
- Isotope ratio measurements are becoming important
- Plans for a gas analysis workshop



Clean Water Focus Group Activities

Contact: gzaidkim@gmail.com

- **Scope**

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

- **Objectives:**

- Develop measurement techniques and methods as well as traceability necessary for correct determination of water quality and quantity.
- Provide strategic advice in clean water problems.

- **1st APMP CWFG Meeting 2017**

- 19-20 September, Bogor, Indonesia – symposium, workshop, and FG meeting
- Symposium had 155 participants
- Workshop had 135 participants



Support for Developing Economies

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

E.g, training workshops in:

- ❖ Support for participation in CIPM MRA
- ❖ Strategy and performance management
- ❖ Mass measurement
- ❖ Electrical measurement
- ❖ Training attachments in chemical measurement

**MEDEA – Metrology: Enabling Developing Economies within Asia*



Korean “Global Metrology Academy”:

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

Training courses in:

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



Capacity Building & Knowledge Transfer (CBKT) Programme

- ❖ NIMT, Thailand hosted the APMP DEC Leadership Training 2017 in December 2017
- ❖ 2016 and 2017 BIPM’s CBKT workshops to assist NMIs’ participation in CIPM MRA.
- ❖ 2016-2019 BIPM CBKT Project: Metrology for Food and Feed in Developing Economies, with support from NIM China, NMISA South Africa

APMP's APEC and SRB Linkages

- ❖ Feb and Aug 2017: Attendance at meetings of APEC Sub-Committee on Standards and Conformance (SCSC) and Specialist Regional Bodies (SRBs)* Forum

**APEC SRBs: APLAC, APLMF, APMP, PAC, and PASC*

- ❖ Oct 2017: APEC-funded Food Safety Workshop, China
- ❖ APMP continues to represent SRBs in APEC's Food Safety Cooperation Forum's Partnership Training Institute Network (FSCF PTIN)
- ❖ Ongoing cooperation with APLMF re: capacity building
- ❖ Nov 2017: APMP-APLAC Joint PT WG meeting – Organisation of joint food safety PT programs for 2017-18, development of PTs in physical metrology
- ❖ Feb and 2018: Attendance at meetings of APEC Sub-Committee on Standards and Conformance (SCSC) and Specialist Regional Bodies (SRBs)* Forum



APMP Mid-Year Meeting 2018



**Hong Kong, China
2-6 July 2018**



APMP General Assembly 2018

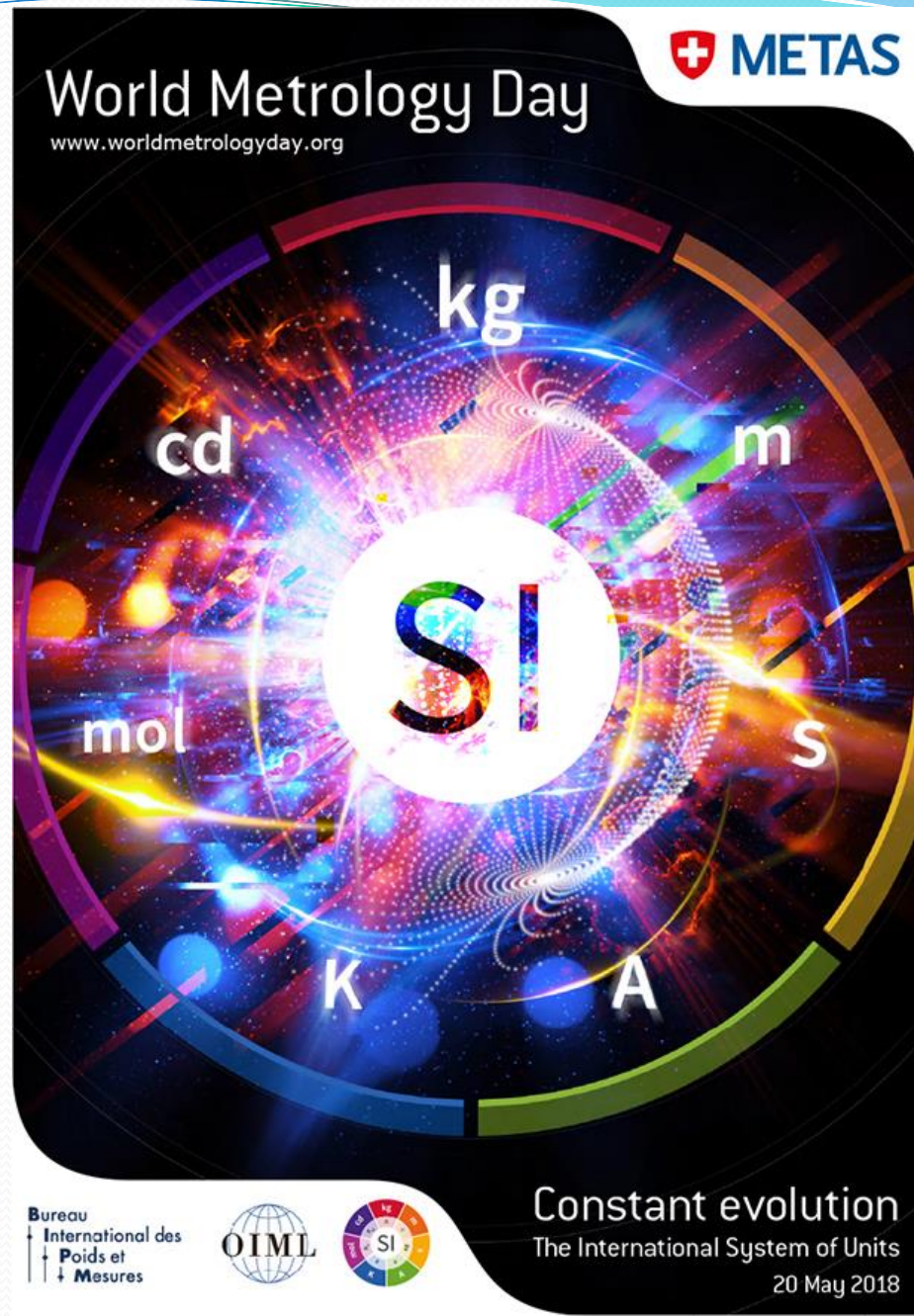


**Singapore
23-30 November 2018**

2019 World Metrology Day Poster

- ✓ For 2018 and 2019, the WMD posters 'bookend' the year of communications effort around the redefinition of the SI. Assuming the proposed redefinition is adopted by the General Conference on Weights and Measures in November 2018, the implementation date for the new definitions will be World Metrology Day 2019.
- ✓ For 2019, the Asia Pacific Metrology Programme (APMP) will be in charge of the WMD poster.
- ✓ Five NMIs raised hands to volunteer to design a poster: SCL Hong Kong China, NMIJ Japan, NMCI Iran, NMIA Australia, NIM China. A design competition will be conducted

WMD 2018



**What's for
WMD
2019?**



Thank You

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