



Asia Pacific Metrology Programme

**APMP Report to APLMF GA
November 2018**

Christchurch, NZ

Membership Updates

New Full Members in 2017 and 2018:

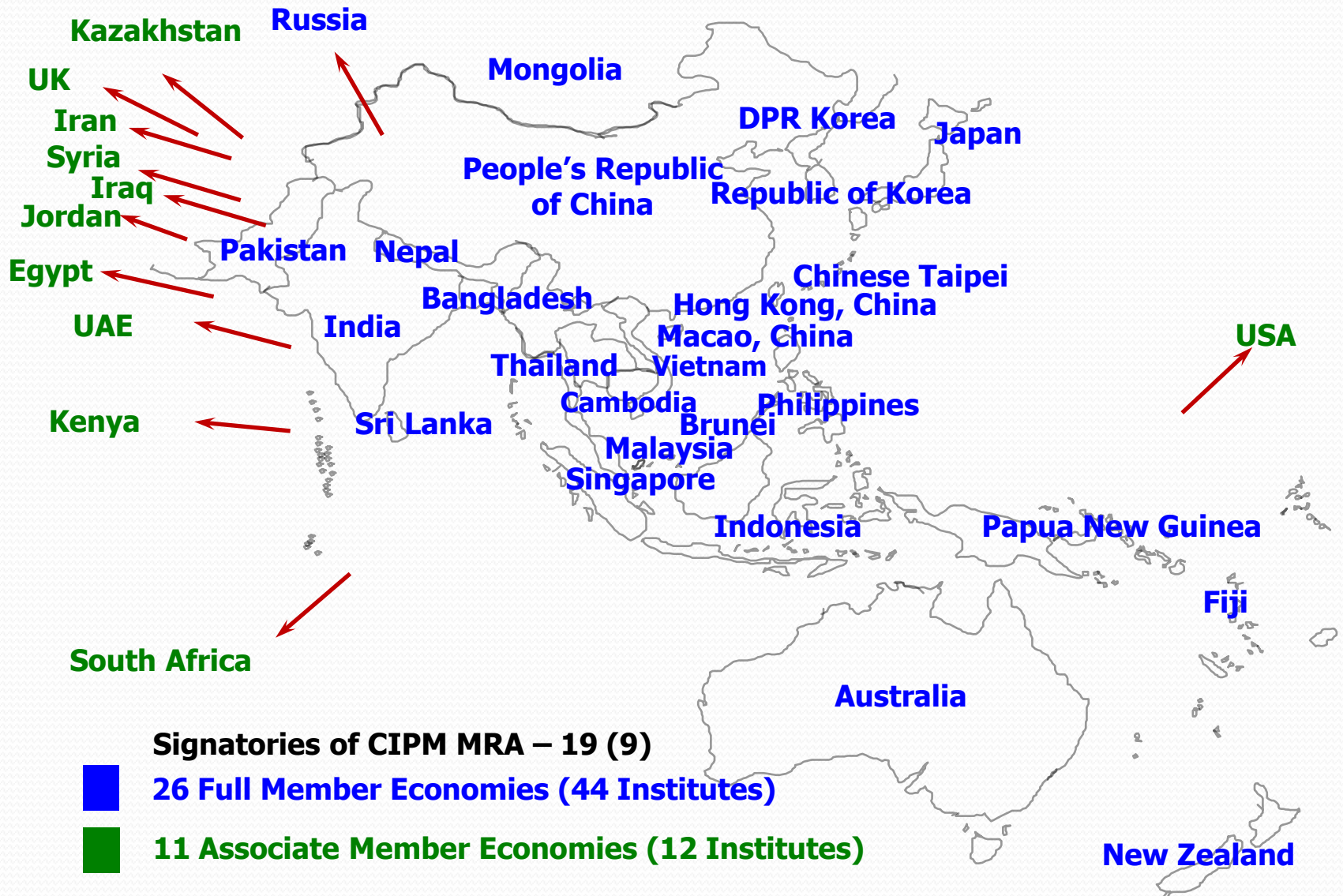
- National Nuclear Energy Agency of **Indonesia**
- Public Health Laboratory, **Macao, China**
- Measurement Standards Laboratory, **Brunei Darussalam**

New Associate Members in 2017:

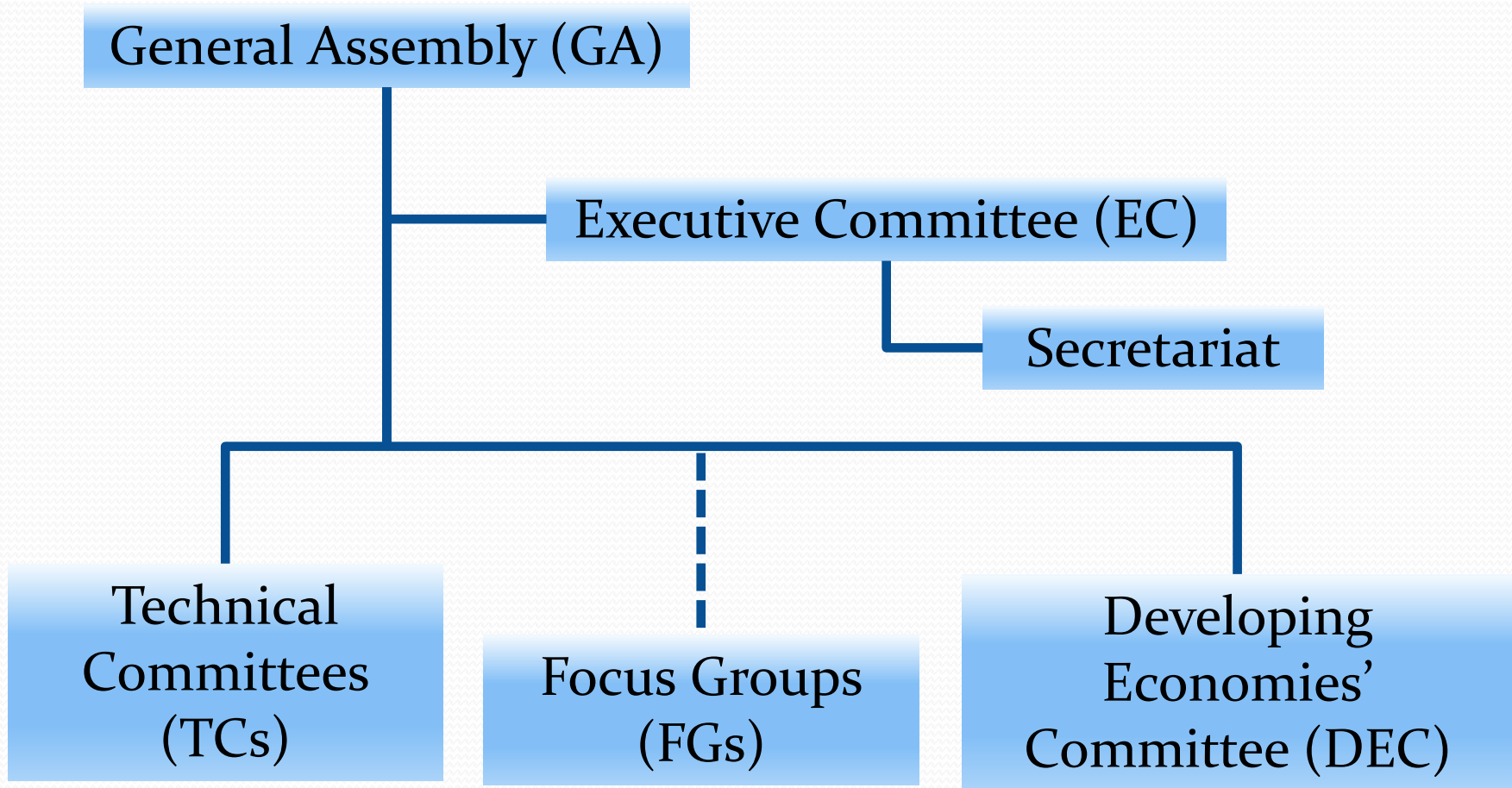
- National Metrology Center of **Iran**
- Central Organization for Standardization and Quality Control, **Iraq**
- National Physical Laboratory, **UK**



Members of APMP



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**: 2017-20
 - 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



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.

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*

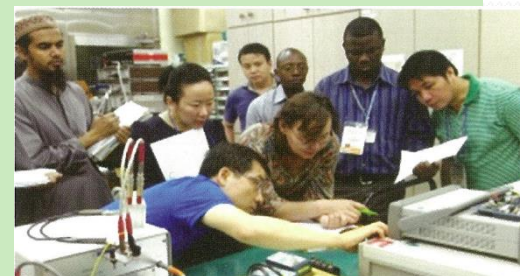


Korean “Global Metrology Academy”:

<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.

APMP Guideline for the Use of Routine Calibration Services Provided by NMIs and DIs as Evidence Supporting CMC Claims

- Long time intervals between international comparisons
- No international comparison for some simple calibration services
- Developing NMI
 - wishes to participate in a bilateral comparisons
 - not easy to find the partner
- Developed NMIs
 - Already having to participate as link labs in many ICs on a voluntary basis
 - Little merit

Proposed Solution

- Use existing routine calibration services of other NMIs
 - provided that it will be transparent and impartial
- Developing NMI:
 - No need to find a partner for official bilateral comparison
 - Fast
 - Has to pay the calibration fee
- Developed NMI:
 - No extra load (“routine” calibration service)

15. Check and confirm comparison report

Third party

3. Request the Third party

4. Agree to be the Third party

8. Send the calibration certificate (A)

14. Send the comparison report

Applicant NMI

7. Perform calibration

13. Analyze data and write comparison report

16. Submit comparison report

TC Chair

17. Ask TC members for review

18. Approve and upload comparison report to open access area of APMP T'C website

5. Request approval for running the comparison

6. Approve running the comparison and assign a unique identifier

11a. Send calibration certificate (B)

1. Request calibration

2. Agree to calibrate

9. Send the artefact

11b. Send calibration certificate (B)

12. Send back the artefact if required

Issuing NMI

10. Perform calibration

Figure 1. Basic flow chart (when the artefact is provided by the Applicant NMI)

APMP General Assembly and related Meetings 2018



**Sentosa, Singapore
23-30 November 2018**





Thank You

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