Members of APMP

- Pakistan
- India
- Bangladesh
- Nepal
- People’s Republic of China
- Thailand
- Vietnam
- Chinese Taipei
- Republic of Korea
- Japan
- Hong Kong, China
- Philippines
- Malaysia
- Sri Lanka
- Singapore
- Indonesia
- Fiji
- Australia
- New Zealand
- Egypt
- South Africa
- Kenya
- UK
- Iran
- Syria
- Iraq
- Jordan
- Kazakhstan
- Uzbekistan
- Russia
- Mongolia
- DPR Korea
- People’s Republic of China
- Hong Kong, China
- Macao, China
- China
- Philippines
- Brunei
- Malaysia
- Singapore
- Indonesia
- Papua New Guinea
- USA

Signatories of CI PM MRA - 19 (9)

- 26 Full Member Economies (44 Institutes)
- 12 Associate Member Economies (13 Institutes)

Indonesia: Organization change of the NMI (Jan 1, 2019) RCM LIPI transferred to National standardization Agency New institute name is SNSU-BSN
# Executive Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Lab</th>
<th>Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toshiyuki Takatsuji</td>
<td>NMIJ</td>
<td>Japan</td>
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<tr>
<td>Osman Zakaria</td>
<td>NMIM</td>
<td>Malaysia</td>
</tr>
<tr>
<td>Yu-Ping Lan</td>
<td>CMS, ITRI</td>
<td>Chinese Taipei</td>
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<tr>
<td>Gao Wei</td>
<td>NIM</td>
<td>China</td>
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<tr>
<td>Jan Herrmann</td>
<td>NMIA</td>
<td>Australia</td>
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<tr>
<td>Yon-Kyu Park</td>
<td>KRISS</td>
<td>Korea</td>
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<tr>
<td>Fang Xiang</td>
<td>NIM</td>
<td>China</td>
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<tr>
<td>Ajchara Charoensook</td>
<td>NIMT</td>
<td>Thailand</td>
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</table>
# Technical Committees

<table>
<thead>
<tr>
<th>TC</th>
<th>Name</th>
<th>Lab</th>
<th>Economy</th>
<th>Corr. CC</th>
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</thead>
<tbody>
<tr>
<td>Lead TC Chair</td>
<td>Chu-Shik Kang</td>
<td>KRISS</td>
<td>Korea</td>
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<tr>
<td>TCAUV</td>
<td>Ryuzo Horiuchi</td>
<td>NMIJ, AIST</td>
<td>Japan</td>
<td>CCAUV</td>
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<td>Hyung-Kew Lee</td>
<td>KRISS</td>
<td>Korea</td>
<td>CCEM</td>
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<tr>
<td>TCFF</td>
<td>Takashi Shimada</td>
<td>NMIJ, AIST</td>
<td>Japan</td>
<td>CCM, WGFF</td>
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<tr>
<td>TCL</td>
<td>Jariya Buajarern</td>
<td>NIMT</td>
<td>Thailand</td>
<td>CCL</td>
</tr>
<tr>
<td>TCM</td>
<td>Sheng-Jui CHEN</td>
<td>CMS/ITRI</td>
<td>Chinese Taipei</td>
<td>CCM</td>
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<td>Victoria Coleman</td>
<td>NMIA</td>
<td>Australia</td>
<td>N/A</td>
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<td>NIM</td>
<td>China</td>
<td>CCTF</td>
</tr>
</tbody>
</table>
“Quality” means ensuring that products and services meet the requirements of the customers.

(from UNIDO leaflet)
APEC SRBs (Specialist Regional Bodies)

Collaboration in MEDEA Project

Metrological Standard
APMP

Providing PTRV
Accreditation

Laboratory Accreditation
APAC

Legal Metrology
APLMF

Metrological Traceability

Investigating collaboration

MoU

Standard Collaboration Document Standard
PASC
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 pont (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 2nd Call
- **Length:** Pilot study on EDM instrument comparison
- **Quality System:** Workshops on the APMP's implementation of CMC review process under the CIPM MRA

**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

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 national/economy-specific problems and standards.

Contact: ghufron@bsn.go.id
Climate Change and Clean Air Focus Group Activities

Scope:

Contact: 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 national 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, oijai@nimt.or.th, 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.

EEFG Activities
- 41 Participants from 16 NMIs, stakeholders and manufacturers.
- Smart Energy Technology ASIA 2019 (SETA2019) on 10 - 12 October 2019, Thailand.
Food Safety Focus Group Activities

Contact: 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

- **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 NMI s, DI s and TCs

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

- **4th APMP MMFG Workshop 2018**
  - Status of MMFG FGI Project
  - Developments at NMI s 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

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

**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.

**BIPM-APMP CBKT Programme**

“Important transitions in the CIPM MRA infrastructure,” November 2019
- consists of two parts: the first part is intended to explain the updates in the CIPM MRA documents and the KCDB 2.0; the second part will discuss the APMP experiences in transitioning to ISO/IEC 17025:2017.
APMP Guidelines for using a Hybrid Comparison Scheme as Evidence Supporting CMC Claims

- When developing NMIs want to participate in an international comparison, they must overcome problems:
  - a considerable long time interval of international comparison
  - no international comparisons for some simple calibration services

- Bilateral comparison?

Difficulties in finding a partner NMI, since developed NMIs:
  - have participated in a number of comparisons as the link lab on a voluntary basis
  - obtain limited benefit from bilateral comparisons with developing NMIs
Implementation of HC

1. Perform calibration

2. Send the calibration certificate (A)

3. Send the artefact

4. Perform calibration

5. Send the calibration certificate (B)

6. Check two certificates

Third party (in most case TC Chair)
APMP Guidelines for using a Hybrid Comparison Scheme as Evidence Supporting CMC Claims: cont’d

- HC scheme cannot be used when key or supplementary comparisons are available.
- Applicant NMI should make every effort to find the partner NMI of bilateral comparison before HC scheme is considered.
- The result of HC as the CMC evidence and capability of Applicant NMI are to be thoroughly reviewed by the on-site reviewers.
- With all these conditions fulfilled, CMCs should not be rejected at Inter-RMO review stage due to the reason that CMC evidence is HC.
APMP General Assembly and Related Meetings 2019

Sydney, Australia
28 November - 6 December 2019
Thank You

APMP Secretariat
National Metrology Institute of Japan
APMP-secretariat@aist.go.jp