



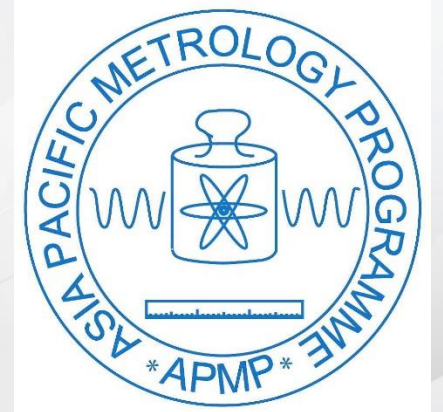
# APMP Updates

To APLMF Forum Meeting

1 November 2022

Dr Takehiro Morioka

APMP EC member



**29<sup>th</sup> ASIA-PACIFIC LEGAL  
METROLOGY FORUM (APLMF)**

Kuala Lumpur, Malaysia

**1 - 2 November 2022**





# What is APMP ?

Asia Pacific Metrology Programme (APMP) is

- An **association of National Metrology Institutes (NMIs)** from the Asia-Pacific region for improving regional metrology capability;
- One of the six **Regional Metrology Organizations (RMOs)** to implement the CIPM MRA for the worldwide mutual recognition of measurement standards and of calibration and measurement certificates;
- One of the **Specialist Regional Bodies (SRBs)** working with APEC to facilitate the development and implantation of standards and conformance infrastructures that addresses APEC goals.



Regional Metrology Organizations (RMOs)



(SRB in metrology)



(SRB in standardization)



(SRB in conformity assessment)

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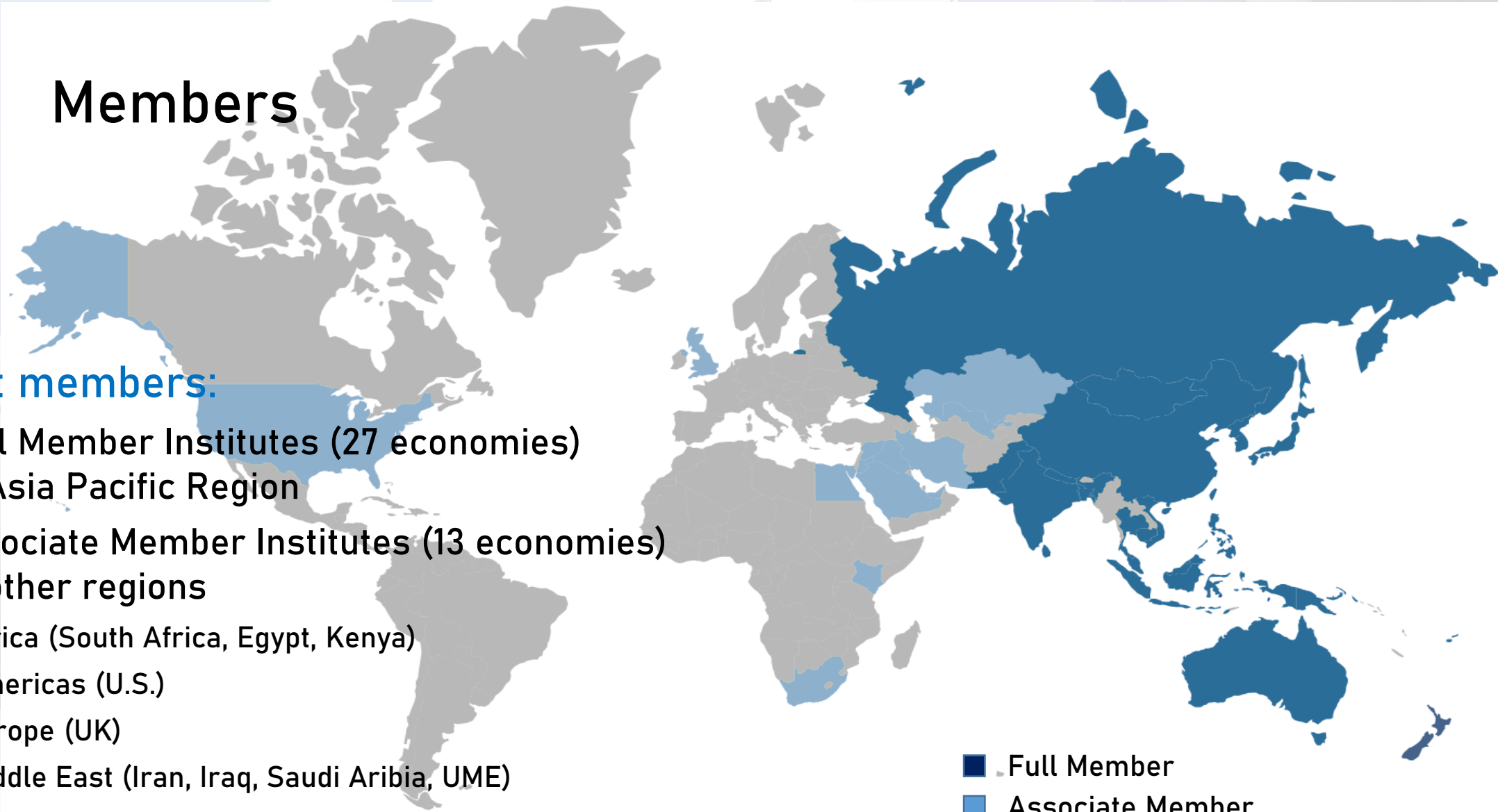




# Members

## Current members:

- 45 Full Member Institutes (27 economies) from Asia Pacific Region
- 14 Associate Member Institutes (13 economies) from other regions
  - Africa (South Africa, Egypt, Kenya)
  - Americas (U.S.)
  - Europe (UK)
  - Middle East (Iran, Iraq, Saudi Arabia, UME)



■ Full Member  
■ Associate Member

Annual membership fee: 200K US\$

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# Responsibilities evolving with time

1980-

## Capacity building of members

- The emphasis is on training and calibration assistance to raise capacity of national metrology institutes (NMIs) within the region.

1999-

## Worldwide mutual recognition of measurements

- To carry out regional comparisons of national measurement standards, ensure confidence in measurements, and coordinate associated work programmes

## Assistance to Developing Economies

- help address the needs of APMP's developing member institutes and to coordinate associated work programmes

Technical Committees (TCs)

Developing Economies' Committee (DEC)

2000-

2014

## Impacts for stakeholders

- Develop capabilities and increase impact of measurement in addressing regional challenges across priority sectors.

Focus Groups (FGs)

METROLOGY FORUM (APLMF)

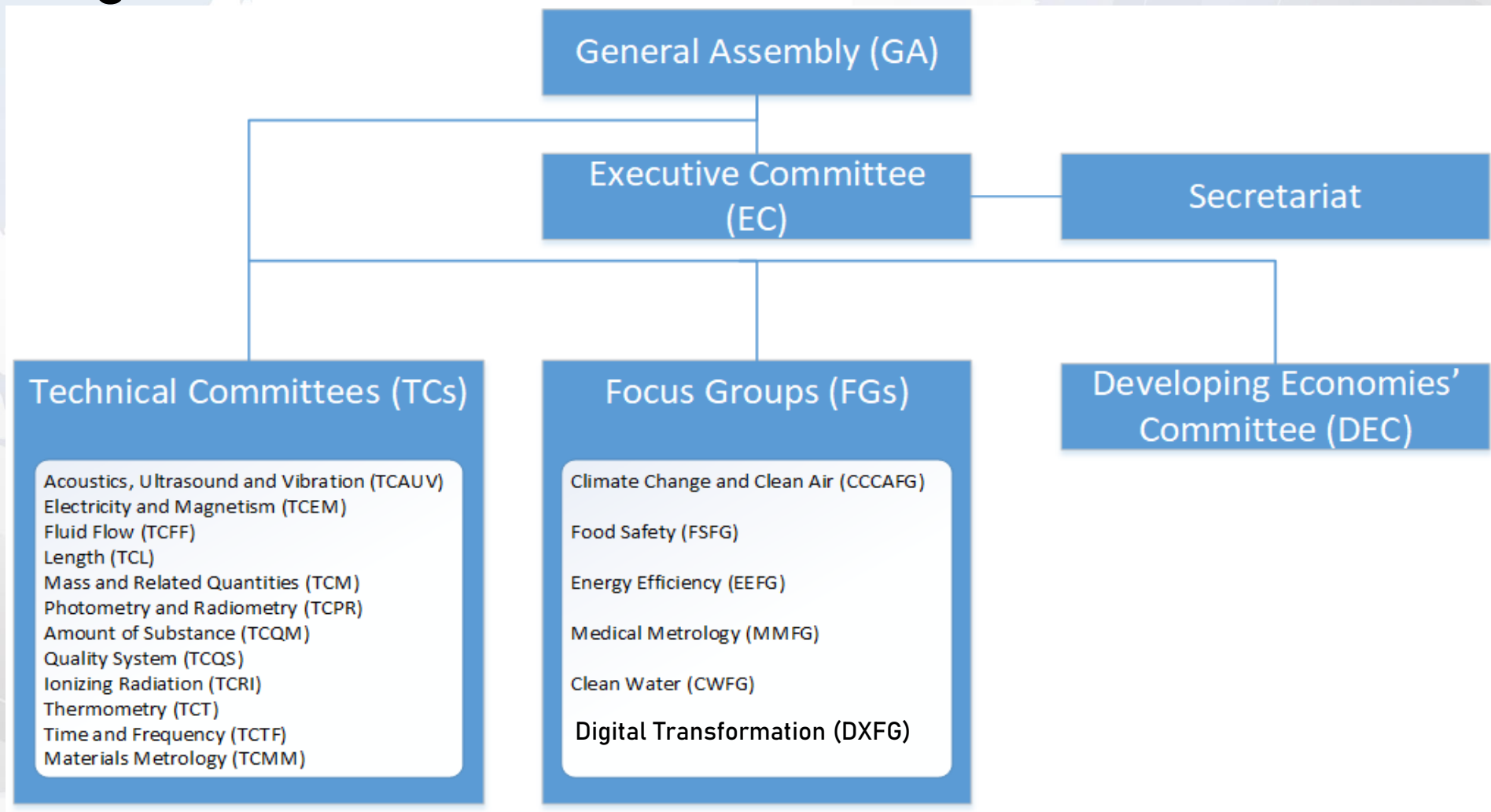
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# Organisation





# Executive Committee



**Chairperson**

Dec 2019 – Dec 2022  
**Xiang FANG**, NIM, China



**Chairperson-elect**

Dec 2022 – Dec 2025  
**Hyun-Min PARK**, KRISS, Korea



**Ajchara Charoensook**  
Thailand  
2018 GA-2022 GA



**Teo Tang Lin**  
Singapore  
2019 GA-2022 GA



**Morioka Takehiro**  
Japan  
2020 GA-2023 GA



**Wei-En Fu**  
Chinese Taipei  
2020 GA-2023 GA

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# Programmes

**APMP TC Initiatives**  
*Advancing metrology*

**APMP FG Initiatives**  
*Impact for stakeholders*

**DEC Programme**  
*Capacity building for  
Developing members*

**(100 K US\$ per year)**

**(45 K US\$ per year)**

## Technical Committees (TCs)

- Acoustics, Ultrasound and Vibration (TCAUV)
- Electricity and Magnetism (TCEM)
- Fluid Flow (TCFF)
- Length (TCL)
- Mass and Related Quantities (TCM)
- Photometry and Radiometry (TCPR)
- Amount of Substance (TCQM)
- Quality System (TCQS)
- Ionizing Radiation (TCRI)
- Thermometry (TCT)
- Time and Frequency (TCTF)
- Materials Metrology (TCMM)

## Focus Groups (FGs)

- Climate Change and Clean Air (CCAFG)
- Food Safety (FSFG)
- Energy Efficiency (EEFG)
- Medical Metrology (MMFG)
- Clean Water (CWFG)
- Digital Transformation (DXFG)

## Developing Economies' Committee (DEC)





# Technical Committees: supporting the CIPM MRA

APMP TCs' core mission is to support operation of the CIPM MRA through:

- reviewing quality system of member NMIs;
- organizing regional key/supplementary comparisons;
- reviewing CMCs submitted from in/out of the region;
- Linking a wider scope of members to the international metrology system;



All data listed in the KCDB have been reviewed and approved within the CIPM Mutual Recognition Arrangement

## APMP participation in the CIPM MRA

**20 / 27**

APMP Full Member Economies are CIPM MRA participants

**6,735 / 25,798**

CMCs published from APMP total CMC entries

**151**

APMP key comparisons

**123**

APMP supplementary comparisons

Source: <https://www.bipm.org/kcdb/>





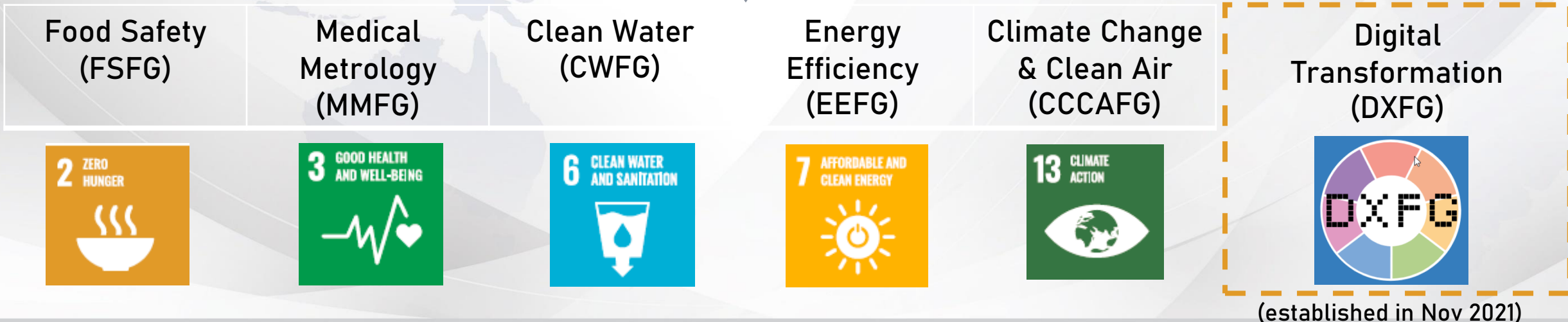
# Focus Groups: Impacts for stakeholders

“Bridges” between Technical Committees and stakeholders

&

Cross-cutting, inter-disciplinary forums to meet sector needs and engage with stakeholders

Topics selected based on UN SDGs and regional priority needs



(established in Nov 2021)

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# APMP Strategic Plan (2021-2023)

## 5 key aspects of current context:

- Significant and long-term impacts of the COVID-19 pandemic.
- Advances in measurement science and technology and the rise of global challenges
- Uneven development among Members
- Effective and efficient governance
- Stronger regional and international engagement

## 6 strategic work priorities:

### 2021 Priority

Work together in the fight against the pandemic

### 2022 Priority

Promote R&D excellence in emerging areas

Increase APMP's impact and value to members and to "leave no one behind"

Enhance quality and efficiency of APMP's governance and operations

Fulfill RMO obligations under the CIPM MRA

Enhance global engagement and partnership



# APMP Response Programme against COVID-19



**COVID-19  
RESPONSE**

This programme aims to encourage and support all scientific, technical, knowledge transfer activities that will improve members' measurement capabilities needed to fight against the COVID-19 pandemic, underpin national initiatives for combating the crisis, or contribute to metrological preparations for future pandemics.

Launched in 2020

Budget: USD 100,000 per year

USD 97,640 awarded till date:

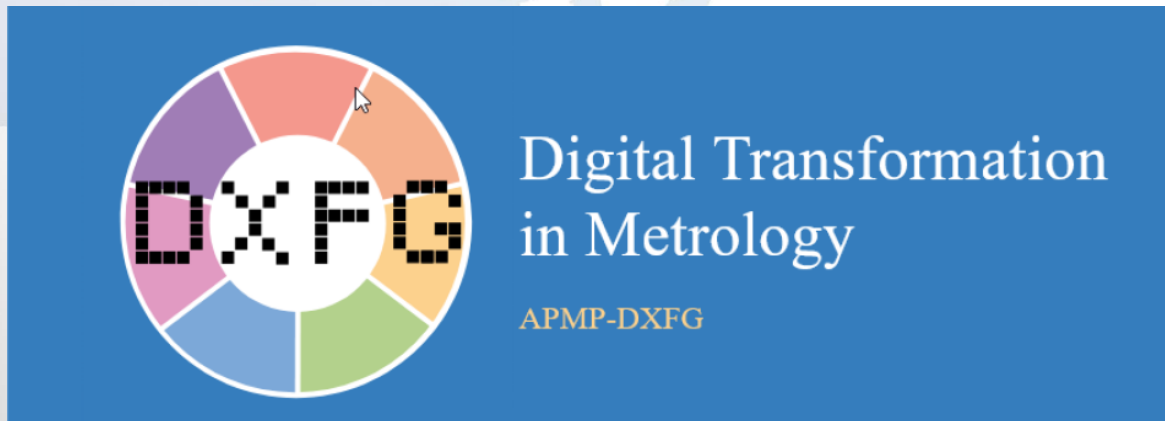
## 5 Projects approved

1. Non-destructive testing for **medical PPE** suit to verify its readiness & prototype of open source DIY positive pressure powered air-purifying respirator and its traceability in pressure testing
2. Comparison measurement and training courses on the **ventilator** tester
3. Investigation of the **human speech/cough droplet size** measurement and comparison for COVID-19 infection control
4. Accurate measurement of **SARS-CoV-2** and development of **nucleic acids reference material**
5. Establish and validate national capabilities to support the growth in use of **thermal imagers** for public thermal screening





# APMP Focus Group on Digital Transformation



- Approved by APMP GA in Nov. 2021
- Current membership: 35, including 2 external partners (members of NCSLI-MII) and reps from EURAMET, GULFMET and COOMET
- DXFG Activities: monthly meetings, external activities, collaborative projects, DXFG infrastructure



## Metrology for Digital Transformation Workshop “DCC– Applications and future developments”

29 June 2022



Chair: Dr. Blair Hall

*Principal Research  
Scientist,  
MSL New Zealand*

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*A full-day event organized by NIMT, Thailand with APMP DEC and DXFG to share presentations on DX topics and disseminate information from attendees of the PTB DCC Summer School*



# 2021 APMP NMI Directors' Workshop

*Foster Asia-Pacific Metrology Collaboration in a Digital World*

The 12<sup>th</sup> APMP NMI Directors' Workshop was held on the theme "Foster Asia-Pacific Metrology Collaboration in a Digital World" for ideas sharing and discussions to develop a holistic understanding of metrology digitalisation and to review the preliminary work plan of the APMP Focus Group on Digital Transformation in Metrology (DXFG). The Workshop connected APMP NMI directors and invited participants virtually for a forward-oriented dialogue driven by digitalisation on 23 November 2021.

Topics that featured prominently on the agenda are:

*Topic 1: How is digital transformation changing NMIs?*

*Topic 2: Key areas of digital transformation for APMP*

*Topic 3: Regional collaboration in metrology for digital transformation*



Workshop Chair: **Dr. Morioka Takehiro**  
APMP Executive Committee Member



**Dr. Takashi USUDA**  
Director General, NMIJ /  
CIPM Secretary



**Mr. FANG Xiang**  
Director, NIM, China /  
APMP Chairperson



**Dr. Hyun-Min Park**  
President,  
KRISS



**Ms. Ajchara Charoensook**  
Director,  
NIMT



**Dr. Cui Shan**  
Scientist III,  
NMC, A\*STAR



**Dr. Blair Hall**  
Principal Research Scientist,  
MSL



**Mr. Mark Kuster**  
Chair,  
NCSLI 141 Measurement  
Information Infrastructure &  
Automation Committee  
(MII&AC)



**Dr. Sascha Eichstädt**  
Convener, EURAMET TC-IM Working Group  
'Metrology for Digital Transformation' (WG M4D) /  
Head of Dept. Metrology for  
Digital Transformation, PTB /  
Chair of IMEKO TC6 "Digitalization"



**Dr. Héctor Laiz**  
Research Director of  
Metrology, INTI,  
Argentina /  
CIPM Member



**Ms. Chang Kwei Fern**  
APAC Chair /  
Director, SAC,  
Enterprise Singapore



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A new issue of APMP Newsletter released in February 2022

# APMP NEWSLETTER

Asia Pacific Metrology Programme

Main activities of APMP in 2021 can be found in this issue.

The newsletter can be accessed at <http://www.apmpweb.org/documents/newsletters.php>

## Inside this Issue

- APMP General Assembly & Related Activities, 2021
- APMP Focus Group on Digital Transformation in Metrology (DXFG) Established
- 2021 APMP NMI Directors' Workshop
- APMP COVID-19 Response Programme Continued
- Enhancing Sustainability of TCI/FGI Projects
- Guidelines on Financial Support for Equipment Leasing by DEC Members
- DEC Highlights
- Progress of MEDEA 3.0
- 21<sup>st</sup> NMI Directors and Member State Representatives Meeting
- APMP New Website on the Way
- Greetings from Chairperson-elect and New TC Chairs
- 2021 APMP Awards
- News from Members



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# Welcome to APMP2022 !

In 2022, the 38<sup>th</sup> APMP General Assembly and Related Meetings will be held at **AIST Tokyo Waterfront**, Odaiba Tokyo, Japan during 28th November to 2nd December 2022.

Invite **liaison organisations** to participate in GA Open Session on 1 December 2022 **ONLINE**



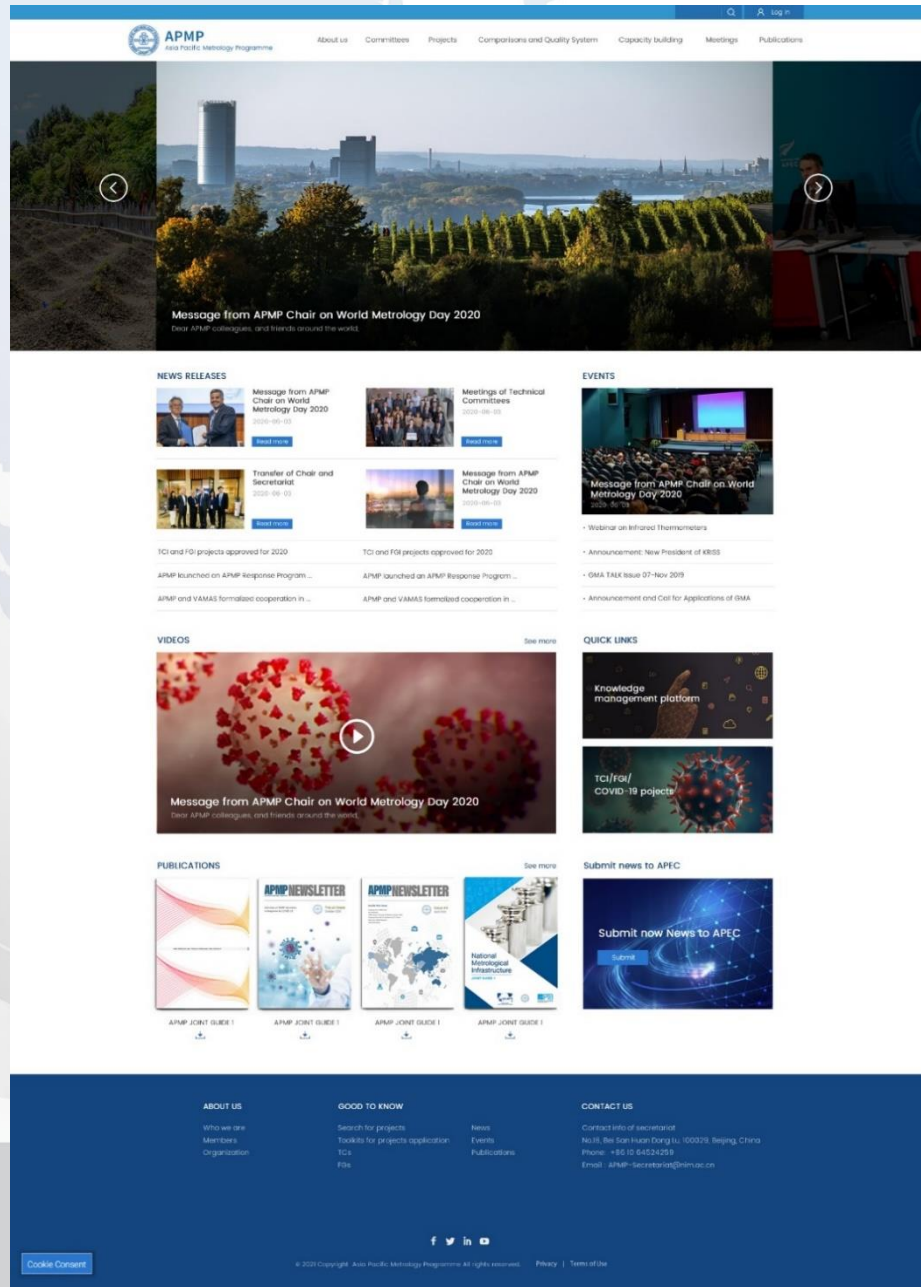
2022 International Cooperation Office / NMIJ, AIST



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# Thank you for your attention !

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APMP Secretariat:  
APMP-Secretariat@nim.ac.cn

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*(new APMP website under construction)*

