



**Item 11: International cooperation**

**Item 11.3: Updates by other organisations in liaison**

**11.3a) Report by the BIPM**

# **BIPM Liaison Report** to the 55<sup>th</sup> CIML meeting

*October 2020*

## THE VISION, MISSION AND OBJECTIVES OF THE BIPM

The BIPM is the intergovernmental organization established by the Metre Convention, through which Member States act together on matters related to measurement science and measurement standards.

Its **vision** is to be universally recognised as the world focus for the international system of measurement.

Its **mission** is to work with the NMIs of its Member States, the RMOs and strategic partners world-wide and to use its international and impartial status to promote and advance the global comparability of measurements for:

- Scientific discovery and innovation,
- Industrial manufacturing and international trade,
- Improving the quality of life and sustaining the global environment.

## THE OBJECTIVES OF THE BIPM

- **To represent the world-wide measurement community**, aiming to maximize its uptake and impact.
- **To be a centre for scientific and technical collaboration between Member States**, providing capabilities for international measurement comparisons on a shared-cost basis.
- **To be the coordinator of the world-wide measurement system**, ensuring it gives comparable and internationally accepted measurement results.

Fulfilling our mission and objectives is underpinned by our work in:

- *capacity building*, which aims to achieve a global balance between the metrology capabilities in Member States;
- *knowledge transfer*, which ensures that our work has the greatest impact.

## SHORT SUMMARY OF BIPM ACTIVITIES DURING CONFINEMENT.

The BIPM was able to adapt quickly to the conditions associated with the COVID-19 outbreak in order to provide maximum support to NMIs during the confinement:

- The key activities, such as the monthly *Circular T*, commissioning of the KCDB 2.0, and the World Metrology Day initiative have been running without interruption – by tele-working.
- The CIPM President has asked NMIs to share examples of how their work is supporting the fight against the COVID-19 pandemic. The responses received are listed in a dedicated 'Metrology in the fight against Covid-19' repository, <https://www.bipm.org/en/worldwide-metrology/covid-19-metrology.html>
- The CCQM developed comparison protocols for organizing scientific comparisons to underpin testing and organized webinars/workshops for the expert community. A recording of the webinar can be viewed at <https://youtube/0Jh65cEPIrl>
- A special edition of the JCTLM Newsletter focusing on reliability of measurements in COVID-19 diagnostics has been published, and summarizes submitted articles from JCTLM Members and Stakeholders. <https://www.bipm.org/utills/common/pdf/JCTLM/JCTLM-Newsletter-2020-COVID-19.pdf>
- The BIPM Capacity Building and Knowledge Transfer programme launched its "Remote learning support" initiative in May 2020 with the delivery of its first on-line short course for COOMET and its first on-line technical exchange for CMC writers (Q/A sessions).

## The CIPM

The 109th meeting of the CIPM will be held on-line on 13-14 October 2020. All CIPM Decisions are available on the BIPM webpages.

The CIPM appointed two new Consultative Committee (CC) Presidents at Session II of its 108th meeting in October 2019.

Dr Héctor Laiz, Director of Metrology, Quality and Environment at INTI (Argentina) was appointed as the President of the Consultative Committee for Acoustics, Ultrasound and Vibration (CCAUV). Dr Laiz succeeds Dr Takashi Usuda, who had been CCAUV President since 2014.

Dr Martyn Sené, Deputy CEO of the NPL (UK), was appointed as President of the Consultative Committee for Ionizing Radiation (CCRI). Dr Sené succeeds Dr Wynand Louw, who has stepped down from the role that he had held since 2014.

Both Dr Laiz and Dr Sené have been members of the CIPM since 2016.

## Institutional news

### *Liaison with Member States and Associate States of the CGPM*

As of January 2020 the BIPM had 62 Member States, and 40 Associate States and Economies of the General Conference on Weights and Measures (CGPM).

**The Republic of Belarus** became a Member State as from 13 January 2020, after having been an Associate State of the CGPM for more than fifteen years.

The list of Member States and Associate States of the CGPM is annexed to this report.

### *Liaison with OIML*

The BIPM staff and the OIML have worked increasingly closely in recent years. This trend continues. Whilst the missions of the two organizations are complementary, both now as far as possible present an integrated

description of the world-wide metrology infrastructure, and its benefits.

The BIPM contributed to the update of the document OIML D1, *Elements for a Law on Metrology*, which, after adoption, will be published as a joint BIPM/OIML publication with a new title reflecting the broader nature of the document: *National Metrology Systems Developing the institutional and legislative framework*.

In November 2019, Mr Henson, Director of the BIPM International Liaison and Communication Department delivered a presentation at the thematic session of the WTO TBT Committee dedicated to NQI and attended the 'Metrology session' of the four-day TBT Advanced Short Course, as an expert speaker on the role of scientific and legal metrology (together with the OIML) as one of the QI key pillars. The BIPM also liaises with the WTO through the International Network on Quality Infrastructure (INetQI).

The BIPM and the United Nations Educational, Scientific and Cultural Organization (UNESCO) cooperate to ensure effective dissemination of information on the importance of the quality infrastructure and particularly metrology in the scientific and wider context. The BIPM and UNESCO have reinvigorated their relationship dating back to 1949 with BIPM attending the sessions of the UNESCO Executive Board and General Conference in 2019.

Links between the BIPM and the OIML:

- The BIPM interacts with the OIML at a senior level through annual bilateral and multilateral meetings at the BIPM (with ILAC and ISO);
- Periodic meetings take place between the Directors of the two organizations and the senior staff, to address both technical matters and organizational matters of common interest to the two organizations;

- The BIPM and the OIML collaborate to promote World Metrology Day, the website of which is hosted by the OIML;
- The OIML is one of the partners in INetQI;
- The OIML is a member of the JCGM and participates in the CCU;
- The BIPM and the OIML provide a BIPM-OIML Resource Center hosted by the OIML;
- The BIPM and the OIML collaborate on the potential participation of new States;
- The two organizations operate a watching brief when one organization attends relevant meetings and the other does not.
- The BIPM Director and Director of the International Liaison and Communication Department participate in the OIML CEEMS Advisory Group.

### The OECD/BIPM joint study

A case study - "*The Case of the International Bureau of Weights and Measures*" describing the operation of the BIPM was published on 6 February 2020 within the OECD initiative "*Partnership of international organisations for effective international rulemaking*" (*IO Partnership*). This study is complementary to [a series of the OECD studies](#) of rule-making practices of selected IOs developed during 2014-2016 for the FAO, IMO, ISO, OECD, OIML, UNECE, WHO and in 2019 for the WTO.

The IO Partnership is currently working on a *Compendium of International Organisations' Practices for Effective International Rulemaking*. The Compendium will use examples from the BIPM and from many other IOs to highlight how IOs work better together and how they can learn from each other about best practices as they go forward. The BIPM shares the role of focal point of WG5 on *coordination among IOs* to better tailor the specific needs of IOs and address more in-depth IO coordination issues.

### JCTLM

The JCTLM is one of the joint committees created by the CIPM with other liaisons. It was established in 2002 through a Declaration of Cooperation between the BIPM, the International Federation for Clinical Chemistry and Laboratory Medicine (IFCC), and ILAC in response to the implementation of the European Community Directive 98/79/EC on *in vitro* medical devices. The JCTLM has welcomed the International Council for Standardization in Haematology (ICSH) as a new Executive Committee Member, effective December 2019. The ICSH joins the BIPM, IFCC and ILAC on the Executive Committee.

The ICSH coordinates Working Groups of experts to examine laboratory methods and instruments for haematological analyses, to deliberate on issues of standardization and to stimulate and coordinate scientific work as necessary towards the development of international standardization materials and guidelines.

This important collaboration brings expertise in clinical laboratory haematology to the JCTLM and provides the opportunity to align the standardization and harmonization of haematology laboratory methods with the reference measurement system of the JCTLM, further enhancing the aim of 'accurate results for patient care'.

A special edition of the JCTLM Newsletter, focusing on reliability of measurements in COVID-19 diagnostics, has been published, and summarizes submitted articles from JCTLM Members and Stakeholders.

### World Metrology Day

Each year on 20 May, the world-wide metrology community celebrates the day the *Metre Convention* was signed in 1875. The project is run jointly by the BIPM and the OIML. The theme for 2020 was "*Measurements for global trade*". The theme raises awareness of the important role measurement plays in facilitating fair global trade - ensuring

products meet standards and regulations, and satisfying customer quality expectations.

The 2020 poster was designed in collaboration with the AFRIMETS RMO and specifically with AA&W Legal Metrology Egypt. The poster was translated into more than 20 languages and information on 23 national celebratory events is provided on the 2020 World Metrology Day Resource Website <http://www.worldmetrologyday.org/>.

The theme for World Metrology Day 2021 will be 'Measurement for health' and the collaboration will be with SASO, Saudi Arabia, a member of GULFMET.

### CIPM MRA and KCDB

The CIPM MRA is the '*Mutual Recognition Arrangement of National Measurement standards and of calibration and measurement certificates issued by National Metrology Institutes*'. Participation in the CIPM MRA continues to grow: it has been signed by representatives of 102 institutes – from 62 Member States, 40 Associates States of the CGPM (Morocco is the latest signatory), and four international organizations. It covers a further 152 institutes designated by the signatory bodies.

In respect of implementing the recommendations of the Working Group on the Implementation and Operation of the CIPM MRA a revised database – KCDB 2.0 – has been developed and was launched on 29 October 2019. It incorporates the CIPM MRA review platform and has an extended numerical search facility. The new web address is [www.bipm.org/kcdb](http://www.bipm.org/kcdb).

A new statistical tool was also incorporated early in 2020.

As of September 2020, the BIPM key comparison database (KCDB) included a total of 25 801 Calibration and Measurement Capabilities (CMCs) including 19 238 in physics and 6 563 in chemistry and Biology. The total number of published CMCs have increased by 2.2 % over a one-year period.

There are 1060 key comparisons and 612 supplementary comparisons registered in the KCDB.

A significant milestone was achieved for the BIPM and the KCDB 2.0 on 2 April 2020 with the publication of a CMC for gravimetry from CENAM (Mexico). This represents the first CMC that has been submitted, reviewed and approved entirely using the KCDB 2.0. This first publication clearly demonstrates the potential of the new system. The CMC was created and submitted for intra-regional review on 26 February 2020. Having completed the SIM review and being subjected to inter-regional review, it was approved and published just five weeks later on the KCDB on 2 April 2020.

### The KCDB CBKT training platform

An offline version of the KCDB 2.0 database has been developed to support the KCDB user community training events. It simulates all aspects of the CMC review and comparison registration processes. The CMC Writers and Reviewers are able to use the offline platform to practice how to create user accounts; to develop their CMCs and to submit their CMCs for intra- and inter-regional review; to act as Reviewers; to submit comparisons as a Pilot; and finally to manage the process as a TC Chair.

### CAPACITY BUILDING AND KNOWLEDGE TRANSFER (BIPM CBKT) PROGRAMME

The BIPM launched a new Capacity Building and Knowledge Transfer Programme (BIPM CBKT Programme) in 2016 aimed at countries and economies with emerging metrology systems (CEEMS).

The aim of the BIPM CBKT programme is to increase the effectiveness with which Member States and Associates engage in the world-wide coordinated metrological system.

So far, around 500 participants from 97 countries, covering all six RMOs, have benefited from the CBKT initiatives. At the

time of writing, over 76 % of Member States and Associates have participated in the CBKT Programme (as trainees, lecturers and sponsors).

CBKT activities organized during the reporting period include:

- "Optimizing the CIPM MRA - the KCDB 2.0", on 4-8 November 2019 at the BIPM;
- "Metrology for Safe Food and Feed - Organic Analysis and Standards" Workshop, on 4-6 November 2019 in Riyadh (Saudi Arabia);
- Important transitions in the CIPM MRA infrastructure, on 29-30 November in Sydney (Australia);
- EURAMET-BIPM Training Course "Organisation and Piloting of Intercomparisons in Ionizing Radiation", on 9-11 October in Teddington (UK);
- BIPM-EURAMET Workshop: "the KCDB 2.0", on 17-19 February 2020 at the BIPM.

BIPM is grateful to the OIML for the support and the lecturers that participated in the global CBKT activities held at the BIPM. Ian Dunmill, Assistant BIPM Director has lectured on a number of the courses, helping to ensure participants understand the OIML role and mechanisms.

In 2020 the BIPM CBKT Programme was extended to include a "remote-learning" capability, which provides on-line assistance to NMI/DI staff from Member States and Associates in their involvement in the CIPM MRA mechanisms. Since May 2020, six online projects have been organized involving more than 500 participants. Full details are available at: <http://www.bipm.org/en/cbkt/>

This report focuses on institutional matters during the period under review. For highlights of the BIPM scientific programme for the period, please refer to the BIPM Annual Review 2019/2020:

<https://www.bipm.org/en/publications/directors-report/>



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