



# **BIPM update**

## **to the WTO TBT Committee, March 2025**

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## Introduction

The International Bureau of Weights and Measures/Bureau International des Poids et Mesures (BIPM) is the intergovernmental organization established by the Metre Convention on 20 May 1875.

It is the home of:

- the International System of Units (SI), the metric system and
- the international reference time scale (UTC).

The BIPM is one of the oldest international organizations in the world and, as of February 2025, has 64 Member States and 37 Associates. This results in a mandate that covers more than 100 UN Member States.

Moving forward, a key objective of the BIPM and its stakeholders is to extend global participation and access to BIPM activities. In answer to this, in 2022 a resolution was adopted by the BIPM's [General Conference on Weights and Measures \(CGPM\)](#), entitled “*Universal adherence to the Metre Convention*”. The aim of this resolution is to expand the categorisations for participation in BIPM activities. Necessary steps are underway to implement this initiative.

## International liaison and communication

### World Metrology Day

While the BIPM and the International Organization of Legal Metrology/Organisation Internationale de Métrologie Légale (OIML) have been celebrating the anniversary of the signing of the Metre Convention as a World Metrology Day since 2000, in November 2023 the General Conference of the United Nations Organization for Education, Culture and Science (UNESCO) declared it an official UNESCO International Day.

On 14 May 2024, [World Metrology Day](#) was celebrated at UNESCO for the first time. This marked a significant step forward in raising global awareness for metrology's role in everyday life and the importance of BIPM's capacity-building activities around the world.

'Sustainability' took centre stage as the official theme of our 2024 World Metrology Day and more than 30 celebratory events were organized around the world. The official poster—developed in partnership with the National Metrology Institute (NMI) of Türkiye and distributed to over 40 institutes and organizations— [can be found in our official poster archive](#).

#### A Landmark Year

2025 marks 150 years of the signing of the Metre Convention. In celebration of this landmark year, the BIPM holds several events to pay tribute to 150 years of global scientific achievements and collaboration in precision measurement and innovation.

**When:** 20-22 May 2025 | **Where:** Paris and Versailles | <https://www.bipm.org/en/bipm-anniversary>

## Institutional liaison

The BIPM was granted the status of Observer to the Intergovernmental Panel on Climate Change (IPCC) in August 2024 and nominated its focal point for IPCC. This new status will allow the BIPM and its global network of metrology experts to contribute to the work of the IPCC – ensuring that data driving climate decisions continue to be grounded in rigorous and traceable measurements.

The BIPM delegation headed by the Director of the BIPM attended the Conference of Parties (COP29) of the United Nations Framework Convention on Climate Change (UNFCCC) in November 2024 in Baku, Azerbaijan. The BIPM was granted observer status to UNFCCC in 2022 which enables the BIPM to bring metrological expertise directly into the UN's climate policy framework.

Recognizing the potential synergy between Quality Infrastructure (QI) and Regulation, on 6 December 2024, the BIPM and the Organisation for Economic Co-operation and Development (OECD) hosted a full-day event to explore the critical links between regulatory systems and QI. The in-person and online event brought together close to 180 leading experts, policymakers and practitioners from around the world. The insights gathered during the event contribute to a deeper understanding of how QI and regulatory systems can work in harmony to address pressing global challenges.

## Capacity-building activities

[The BIPM Capacity Building and Knowledge Transfer Programme \(CBKT\)](#) aims to increase the effectiveness with which Member States and Associates engage in the world-wide coordinated metrological system. Nowadays, the programme has a highly appreciated portfolio that continues to expand. The CBKT initiatives are delivered through various activities such as workshops, laboratory placements and remote-learning activities, including the BIPM e-learning platform, which also hosts knowledge transfer material from the Regional Metrology Organizations (RMOs).

Around 60 CBKT initiatives, designed to support national and regional metrology activities, were delivered with the involvement of 65 lectures and experts from NMIs, RMOs and International Organizations. There have been over 4 000 participations in-person and online from 126 countries, covering all six RMOs. The e-learning platform hosts more than 25 courses and has more than 1 850 registered users.

## Young metrologists' 2050+ vision to shape the future of metrology

The BIPM, in collaboration with RMOs, has concluded a foresight exercise aimed at generating and facilitating visionary ideas for future opportunities and challenges. The exercise was conducted with groups of young metrologists through workshops, debates and interviews. The results will directly contribute to the *Strategy 2030+* of the [International Committee for Weights and Measures \(CIPM\)](#), the BIPM's executive organ.

A team of eleven coordinators, nominated by RMOs, brought together a global network of young metrologists to turn this vision into reality. More than 380 young professionals from around the world participated, engaging in workshops, debates and interviews.

Through this collaborative effort, young metrologists identified thirteen key areas that could shape future metrological needs, service delivery methods, advancements in science and technology, and collaborations in measurement science by 2050 and beyond. While some of these areas are well-established, others are only beginning to gain traction.

This initiative has demonstrated how young metrologists are stepping up as leaders, bringing fresh ideas and passion to the field. They are not only prepared to tackle future challenges but are also driving the transformation of metrology to ensure its continued relevance.

The Young Metrologists' 2050+ Vision initiative proves that metrology's future is in capable hands. The energy, creativity and leadership of these young professionals will drive metrology forward to keep up with both technological innovations and society's needs. Their insights not only complement the CIPM Strategy 2030+ but also inspire future leaders in the field.

## Digital transformation

The BIPM plays a leading role in the digital transformation of metrology and, alongside nine international organizations, has signed a [Joint Statement of Intent on the digital transformation in international scientific and quality infrastructure](#). This statement provides a platform for signatories to indicate their commitment to developing and establishing a world-wide *uniform and secure* data exchange format based on the SI.

In support of this goal, the first meeting of the Forum on Metrology and Digitalization was held in March 2024 and the second in February 2025.

The forum is tasked with advising the CIPM on the SI Digital Framework and the broader implications of global digital transformation for metrology and international Quality Infrastructure (QI). Its mission includes:

- harmonizing digitalization activities between NMIs, Consultative Committees, Regional Metrology Organizations and BIPM headquarters; and
- acting as a platform for exchanging information, fostering collaboration and creating synergies. *This includes liaising with international QI organizations and relevant industry associations.*

The first services made available by the BIPM through the SI Digital Framework include:

- (i) the SI Reference Point - a digital reference for the SI;
- (ii) a reference point for kinds of quantity;
- (iii) digital references for the Service Categories defined by the CIPM's Consultative Committees in physics and ionizing radiation; and
- (iv) a reference point for nuclides.

All the services are currently in beta-testing and user feedback is warmly encouraged.