

CIPM 2023 Update Strategy 2030+

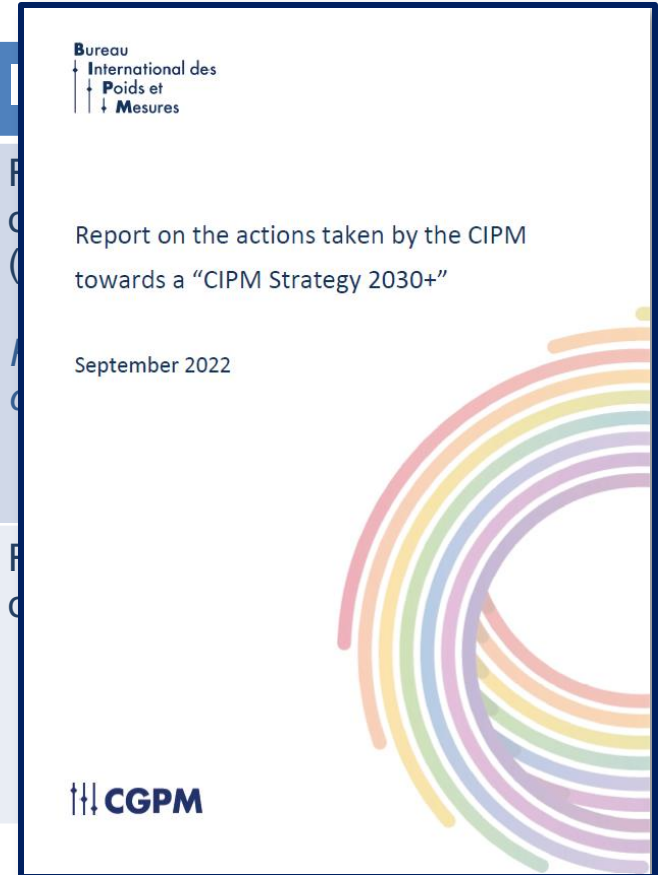
Wynand Louw
CIPM President

Bureau
International des
Poids et
Mesures



CIPM Strategy 2030+ in Response to the Resolutions

Item	Description
1	Responding to Evolving Needs for Metrology
2	Addressing key scientific challenges to advance the global measurement system
3	Strategy for deepening engagement with other international organizations on measurement science issues
4	Reviewing the strategy for the future membership of the organization: On the objectives of the BIPM
5	Modernizing the operations of the organization and Governance



Evolving needs in metrology in the 21st century

In the 20th century, needs were mainly related to technical disciplines, reflected at the CIPM level in discipline-based Consultative Committees

Metrology needs in the 21st century are notably different in character:

- Triggered by regional or even world-wide challenges
- Linked to rapid technology developments (e.g. “digital revolution”)
- Horizontal nature, requiring cooperation of many metrology disciplines



CGPM 2022 resolution A – call for action!

encourages the CIPM

- to develop a long-term vision for an international measurement system that will remain relevant and adequately address new metrology challenges,
- to establish inter-disciplinary (“horizontal”) groups that will address these new challenges and will be complementary to the existing quantity-based (“vertical”) structure of its Consultative Committees,
- to mark the 150th anniversary of the signing of the Metre Convention (on 20 May 2025) by outlining a new vision for the BIPM that builds on the CIPM report on the “Evolving Needs in Metrology” and is based on a review of the achievements of the BIPM and the future requirements for its work,
- to consult widely on its proposal for a new vision for the BIPM to be presented at the 28th meeting of the CGPM (2026),

and invites Member States and National Metrology Institutes to contribute to the work of the CIPM in addressing the evolving needs for metrology and in developing a new vision for the BIPM.



21st Century Metrology Grand Challenges

The CIPM identified five “Metrology Grand Challenges”:

- Climate change and environment
- Health & life sciences
- Food safety
- Energy
- Advanced manufacturing



Next to cross-cutting challenges related to *how* we make measurements:

- Digital Transformation
- “New” metrology (e.g. sensor networks, NMI-on-a-chip)



Climate change and environment

The CIPM established a Sectorial Task Group on Climate Change and Environment given the urgency to act on this theme.

Activities:

- Facilitate dialogue between NMIs and stakeholders
- Articulate internationally accepted metrology challenges in the field
- Encourage collaboration between CCs, NMIs and stakeholder



FOCUS GROUP ON CLIMATE
CHANGE AND CLEAN AIR

**METROLOGY FOR
CLIMATE ACTION**

26–30 SEPTEMBER 2022

Workshop Program



**BIPM-WMO Metrology for Climate
Action Workshop report published**


<https://www.bipm.org/en/-/2023-06-21-wmo-workshop-report-1>



<https://www.bipmwmo22.org/>

21st Century Metrology Grand Challenges - status

“Metrology Grand Challenges”:

- Climate change and environment 
- Health & life sciences
- Food safety \Rightarrow starting
- Energy
- Advanced manufacturing

Cross-cutting challenges related to *how* we make measurements:

- Digital Transformation \Rightarrow starting
- “New” metrology (e.g. sensor networks, NMI-on-a-chip)

NEW

Quantum technologies

\Rightarrow **Workshop 21-22 March 2024**

**BIPM Workshop on Accelerating the adoption of
Quantum Technologies
through Measurements and Standards**

21st and 22nd March 2024
BIPM, Sèvres

<https://www.bipm.org/en/bipm-workshops/quantum-tech>



CIPM Strategy development update

Item	Description	Status	Outputs
1	Responding to Evolving Needs for Metrology	Consultation	Draft report to discuss with CCs and NMIs; draft Resolution
2	Addressing key scientific challenges to advance the global measurement system	Consultation	Discussion document and reports from CCTF and CCU, four draft Resolutions
3	Strategy for deepening engagement with other international organizations on measurement science issues	Completed and actions continue	Several MOUs concluded and procedures in place
4	Reviewing the strategy for Universal Adherence to the Metre Convention	Consultation	Draft Resolution to request a mandate from the CGPM
5	Modernizing the operations of the organization and Governance	Ongoing	CIPM RoP, Code of Conduct, several policies and procedures on hybrid meetings, decisions by correspondence, etc.



CIPM Strategy development update

#3 - strategy for deepening engagement with other international organizations on measurement science issues

The CIPM concluded that the strategy for engagement with other IOs is mature and the CIPM oversight provides good governance.

- The BIPM International Liaison and Communication Department was strengthened to maintain the relationships and interactions.*
- CIPM members were assigned to each strategic liaison to assist the staff with the strategic interactions, and the liaison arrangements are being put into practice. I will return to the recent liaison initiatives later.*



CIPM Strategy development update

#3 - International and technical liaisons

In the past four years the CIPM and the BIPM staff continued to interact with other international organizations for whom metrology matters

We formalized our existing liaisons through agreements, arrangements, or memorandums of understanding with the following international organizations:

- *International Union of Pure and Applied Chemistry (IUPAC)*
- *International Telecommunication Union (ITU)*
- *Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)*
- *Committee on Data of the International Science Council (CODATA)*
- *International Federation of Clinical Chemistry and Laboratory Medicine (IFCC)*



CIPM Strategy development update

#3 - International and technical liaisons



OIML

A Joint Task Group between the BIPM and the OIML was set up with the aim of having a “single voice for metrology” and to foster enhanced cooperation between the two organizations. The Task Group met a number of times. The group consists of the CIPM President, BIPM Director, OIML President and the BIPM Director.

The two organizations collaborate in many ways:

- World Metrology Day, including the new initiative towards gaining recognition by UNESCO
- Joint development of documents (Notably the “*National Metrology Systems - Developing the institutional and legislative framework*”)
- Liaison activities
- Representation
- Operational and institutional matters
- Capacity building



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4	Reviewing the strategy for Universal Adherence to the Metre Convention	Consultation	Resolution gave the mandate from the CGPM
5	Modernizing the operations of the organization and Governance	Ongoing	CIPM RoP, Code of Conduct, several policies and procedures on hybrid meetings, decisions by correspondence, etc.



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4	Reviewing the strategy for Universal Adherence to the Metre Convention	Consultation	CGPM Resolution
5	Modernizing the operations of the organization and Governance	Ongoing	CIPM RoP, Code of Conduct, By-laws, procedures



END



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