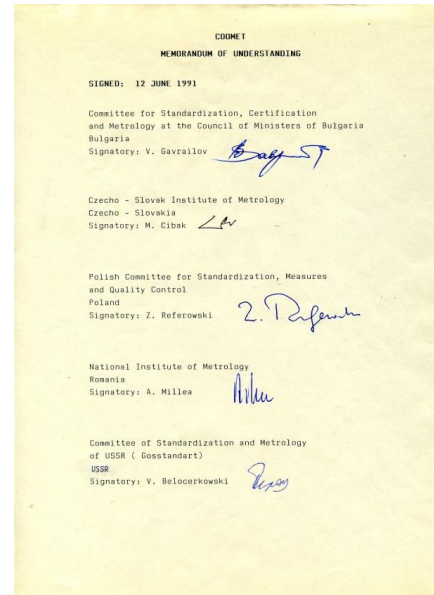


Euro-Asian Cooperation of National Metrological Institutions (COOMET)



Date of COOMET's establishment:

On 12 June 1991 in Warsaw representatives of national metrology organizations of five countries (**Bulgaria, Poland, Romania, the USSR and Czechoslovakia**) signed the COOMET Memorandum of Understanding.



Dynamics of membership in COOMET:

Number of members	Joining date	Country
5	12.06.1991	Bulgaria, Poland, Romania, USSR, Czechoslovakia
7	13.11.1991	Germany, Cuba
8	02.06.1992	Ukraine
9	08.12.1992	Belarus
9	17.03.1993	Slovakia (instead of Czechoslovakia), Russia (as the successor of the USSR)
10	04.04.1995	Lithuania
11	24.04.1997	Moldova
12	11.11.1998	Kazakhstan
12*	25.05.2000	Kyrgyzstan
13	06.05.2002	DPR of Korea
14	27.05.2004	Uzbekistan
15	04.09.2006	Georgia
17	24.04.2007	Azerbaijan, Armenia
18	18.11.2009	Tajikistan
19	05.06.2013	Bosnia and Herzegovina
20	16.04.2014	Turkey
21	20.04.2016	China
19**	26.10.2021	
18***	05.07.2023	

Notes

*Poland terminated its membership in COOMET in June 2000, limiting itself to cooperation in EUROMET (currently EURAMET).

**Romania terminated its membership in COOMET in October 2021, limiting itself to cooperation in EURAMET; DPR of Korea also withdrew from COOMET.

*** Lithuania terminated its membership in COOMET from 05.07.2023 (limiting itself to cooperation in EURAMET).

**** A notice was received from the Ministry of Economy of Ukraine in April 2023 on the termination of participation in COOMET activities from 19.10.2023.

Full members (13)


Country	Membership in COOMET
Armenia	Full member, 2007
Azerbaijan	Full member, 2007
Belarus	Full member, 1992
Bulgaria	Full member, 1991
Georgia	Full member, 2006
Kazakhstan	Full member, 1998
Kyrgyzstan	Full member, 2000
Moldova	Full member, 1997
Russia	Full member, 1991
Slovakia	Full member, 1993
Tajikistan	Full member, 2009
Ukraine	Full member, 1992
Uzbekistan	Full member, 2004

COOMET D1/2022:

COOMET is an organization for the Euro-Asian cooperation of National Metrology Institutions (from the countries of Central and Eastern Europe, Asia and nearby countries) and is open to the National Metrology Institutions of countries from other regions to join it.

Associated members (5)

Country	Membership in COOMET
Bosnia and Herzegovina	Associated member, 2013
China	Associated member, 2016
Cuba	Associated member, 1991
Germany	Associated member, 1991
Turkey	Associated member, 2014

 *Members of other RMOs*

COOMET D2/2021:

*From each state only **one national metrology institution** on behalf of which the Memorandum of Understanding was signed, **can be a member of COOMET.***

COOMET D1/2022:

*The COOMET body initiating and supporting cooperation is the **Committee**. It consists of the Heads of National Metrology Institutions of the COOMET member countries or persons appointed by them, one representative from each institution. The Committee meets as often as required but at least once per year.*

Mission of COOMET

Raising the level of metrology development, support and expansion of an integrated measurement infrastructure for countries in the Euro-Asian region and other interested countries that makes it possible for every national metrological institute to promote innovation, competitiveness, trade, consumer safety, sustainability and ensuring international recognition.



Vision of COOMET

Efficient, representative, competent regional metrology organization, recognized by the international community.



COOMET Strategy for 2020-2025 defines the following tasks:

- A.** Facilitation of international recognition of national measurement standards
- B.** Facilitation of recognition of QMS of NMIs/DIs of COOMET member countries
- C.** Support of COOMET member countries in gaining the status of membership in the Metre Convention
- D.** Facilitation of international practice in legal metrology
- E.** Facilitation of advanced training and knowledge transfer in COOMET member countries
- F.** Conduct of research in the field of metrology
- G.** COOMET internal development and external representation
- H.** Digital transformation in metrology



Specific actions to achieve the strategic tasks are provided for in the **COOMET Development Program for 2023-2025** (COOMET P1/2023).

Official languages (in which meetings of COOMET bodies are conducted and documents prepared): **Russian and English.**

COOMET D1/2022:

The Committee elects the President from among its Members, for a period of three years, with the eligibility to be re-elected for one subsequent term of office.

The Secretariat's activities are financed at the expenses of the Party presiding in the COOMET Committee. On a voluntary basis, other COOMET Members can render financial support to the Secretariat, the Presidential Council and other COOMET bodies for the implementation of specific tasks.

COOMET objectives:

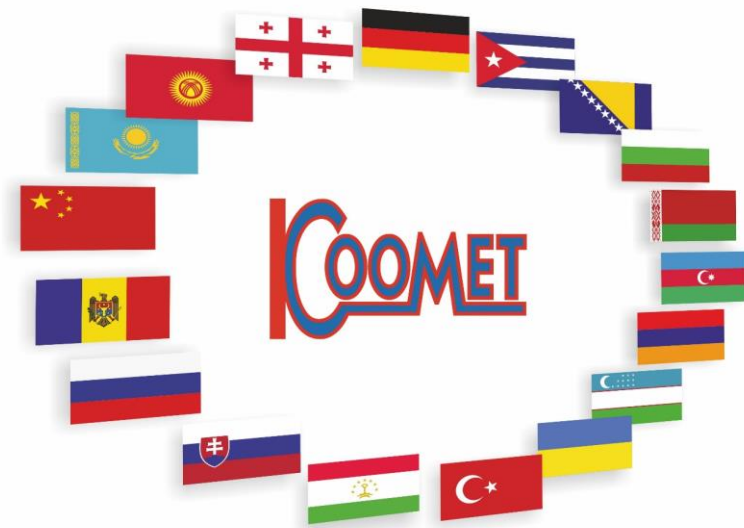
- ❖ to contribute to effectively solving the issues of ensuring the uniformity of measurements, to raising the level of metrology development of the countries in the Euro-Asian region and other stakeholders, to supporting and expanding an integrated measurement infrastructure for the countries in the Euro-Asian region and other interested countries that makes it possible for every National Metrology Institute to promote innovation, competitiveness, trade, consumer safety, sustainability and ensuring of international recognition.
- ❖ to function as a forum for cooperation in the field of scientific and legal metrology

COOMET tasks:

1. to perform the functions of a regional metrology organization (RMO) and regional legal metrology organization (RLMO);
2. to facilitate technical cooperation and to strengthen the links among COOMET members and metrology institutes outside COOMET and other regional and international metrology organizations;
3. to create effective mechanisms in order to:
 - achieve international recognition of national measurement standards, calibration and measurement certificates, issued by National Metrology Institutes of COOMET member countries under the CIPM MRA, as well as facilitate metrological traceability, mutual provision of metrological services and elimination of technical barriers to trade;
 - exchange information on the current status and development trends of the metrological infrastructure in member countries and mutually support their improvement;
 - carry out innovative research in metrology;
 - use modern information technology in metrology;
 - provide and coordinate knowledge and experience transfer process in scientific, legal and industrial metrology;
 - apply best practices in the field of scientific and legal metrology.

Main areas of cooperation:

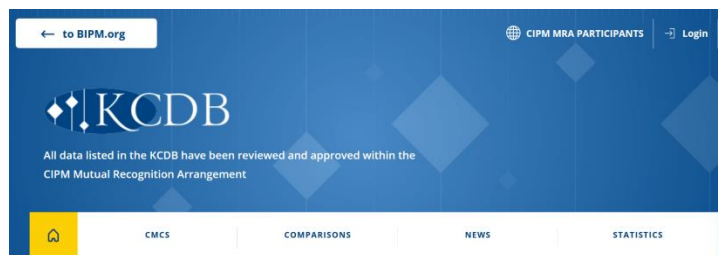
- ❖ Measurement standards of physical quantities
- ❖ Legal Metrology
- ❖ Quality management systems
- ❖ Information and training
- ❖ Prospective research in metrology



Subject fields of cooperation in COOMET:

- General Questions Concerning Measurements (General Metrology);
- Acoustics, Ultrasound, Vibration;
- Electricity and Magnetism;
- Flow Measurement;
- Length and Angle;
- Mass and Related Quantities;
- Photometry and Radiometry;
- Physical Chemistry;
- Ionizing Radiation and Radioactivity;
- Thermometry and Thermal Physics;
- Time and Frequency;
- Reference Materials;
- Legal Metrology;
- Quality Management Systems ;
- Information and Information Technology;
- Improvement of COOMET Performance.

COOMET as a **regional metrology organization** is a member of the [Joint Committee of the Regional Metrology Organizations and the BIPM \(JCRB\)](#), and it ensures participation of a number of COOMET countries in the implementation of the Mutual Recognition Arrangement of national measurement standards and of calibration and measurement certificates issued by national metrology institutes (CIPM MRA).



<https://www.bipm.org>

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

Regional Metrology Organizations:

- ❖ Intra-African Metrology System (AFRIMETS);
- ❖ Asia Pacific Metrology Programme (APMP);
- ❖ Euro-Asian Cooperation of National Metrological Institutions (COOMET);
- ❖ European Association of National Metrology Institutes (EURAMET);
- ❖ GULF Association for Metrology (GULFMET);
- ❖ Inter-American Metrology System (SIM).

<https://www.bipm.org/en/worldwide-metrology/regional/>

Country	Relation to the Metre Convention
Belarus	Member, 2020
Bulgaria	Member, 1911
China	Member, 1977
Germany	Member, 1875
Kazakhstan	Member, 2008
Russia	Member, 1875
Slovakia	Member, 1922
Turkey	Member, 1875
Ukraine	Member, 2018

Country	Relation to the CGPM
Azerbaijan	CGPM Associate, 2015
Bosnia and Herzegovina	CGPM Associate, 2011
Cuba*	CGPM Associate, 2000
Georgia	CGPM Associate, 2008
Moldova	CGPM Associate, 2007
Uzbekistan	CGPM Associate, 2018

**Note – Cuba was a CGPM Associate and participated in the implementation of the CIPM MRA since 2000, however Cuban NMIs have currently lost (from 01.01.2022) the status of signatories to those Arrangements.*

Country	Relation to the Metre Convention/CGPM
Armenia	NOT YET
Kyrgyzstan	NOT YET
Tajikistan	NOT YET



- ❖ **Members of the Metre Convention – 9**
- ❖ **CGPM Associates – 5**
- ❖ **Signatories to the CIPM MRA – 14**

COOMET – regional legal metrology organization (RLMO)



COOMET is a **regional legal metrology organization** and a member of the Round Table under the auspices of the International Legal Metrology Organization (OIML)

<https://www.oiml.org/en>



RLMO Round Table

The RLMO Round Table is a network and a forum for information-sharing among the Regional Legal Metrology Organisations that liaise with the OIML.

This group is a source of advice and feedback for the OIML to initiate actions that are of interest for all the parties involved. It has been meeting annually since 2007, usually in conjunction with the CIML meeting. The RLMO RT is currently chaired by the CIML First Vice-President, Dr Charles Ehrlich.

The RLMO Round Table has representatives from the following organisations:

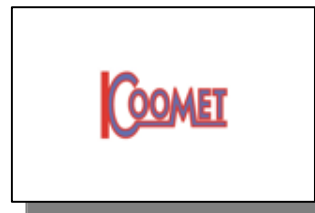
Organizations in Liaison

- Intergovernmental organizations
- Regional Legal Metrology Organizations (RLMO)
- Other Regional Organizations
- Miscellaneous

Display

	Name	Acronym	URL
1	Asia-Pacific Legal Metrology Forum	APLMF	http://www.aplmf.org
2	Euro-Asian Cooperation of National Metrological Institutions	COOMET	http://www.coomet.org
3	European Cooperation in Legal Metrology	WELMEC	http://www.welmec.org
4	Gulf Association for Metrology	GULFMET	http://www.gulfmet.org/
5	Intra-African Metrology System	AFRIMETS	http://www.afrimets.org
6	Sistema Interamericano de Metrologia	SIM	http://www.sim-metrologia.org
7	THE EUROPEAN ASSOCIATION OF NATIONAL METROLOGY INSTITUTES	EURAMET	www.euramet.org

<https://www.oiml.org/en/structure/rlmo-round-table>





COOMET President:
Gabit MUKHAMBETOV

Contacts:

Phone: +7 7172 28 29 99

Email: ksm.coomet@gmail.com

COOMET President provides general management of COOMET, coordination of cooperation with the international and regional metrology organizations, coordination of cooperation on the issues related to information and knowledge transfer



КАЗСТАНДАРТ



COOMET Secretariat:

Head: Ainur RAKHADINOVA

Phone: +7 7172 28 29 38

email: ksm.coomet@gmail.com



COOMET D1/2022:

*The President, Vice-Presidents and Head of the COOMET Secretariat form the **Presidential Council**, which develops the policy of cooperation within COOMET, interacts with international and regional metrology organizations, organizes cooperation between the Committee meetings and prepares questions to be considered at these meetings.*



Vice-President
Evgeny Lazarenko
(Rosstandart, Russia)

Cooperation in the field
of measurement
standards.



Vice-President
Mustafa CETINTAS
(TÜBİTAK UME, Türkiye)

Cooperation in the field of
development and peer
review of quality
management systems.
Joint scientific research.



Vice-President
Xinhua DAI
(NIM, China)

Cooperation with
countries with emerging
metrology systems

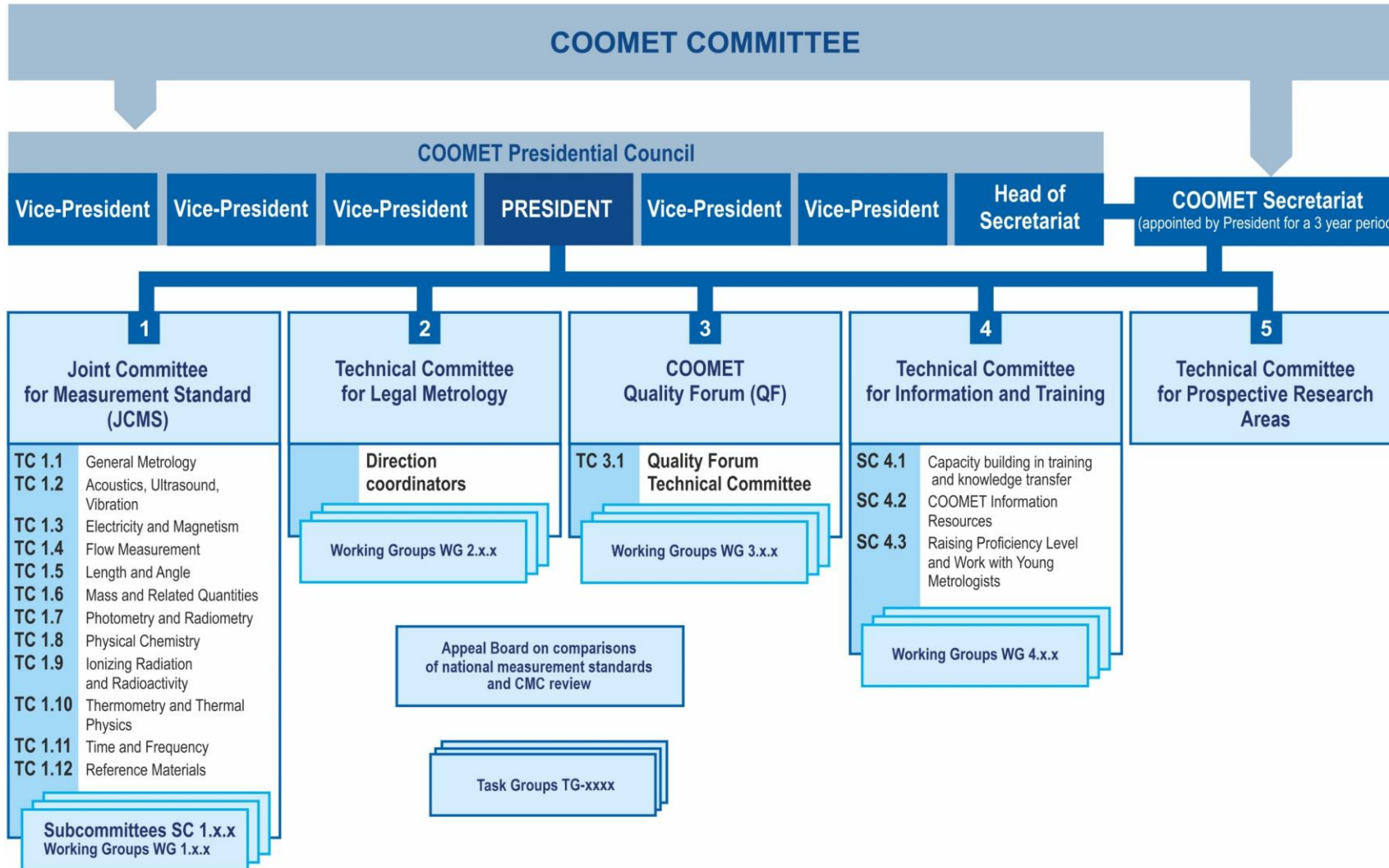


Vice-President
Lazizbek SAIDORIPOV
(UzNIM, Uzbekistan)

Cooperation in the field
of legal metrology



Head of Secretariat
Ainur RAKHADINOVA
(KazStandard, Kazakhstan)



COOMET D1/2022:

Following the decision of the COOMET Committee the following **COOMET structural bodies** are established for the purpose of initiating work in the major fields and directions of cooperation: Joint Committees, Technical Committees (TC), Councils, Forums), which constitute the **Organizational structure of COOMET**.

Structural Bodies may establish working bodies:

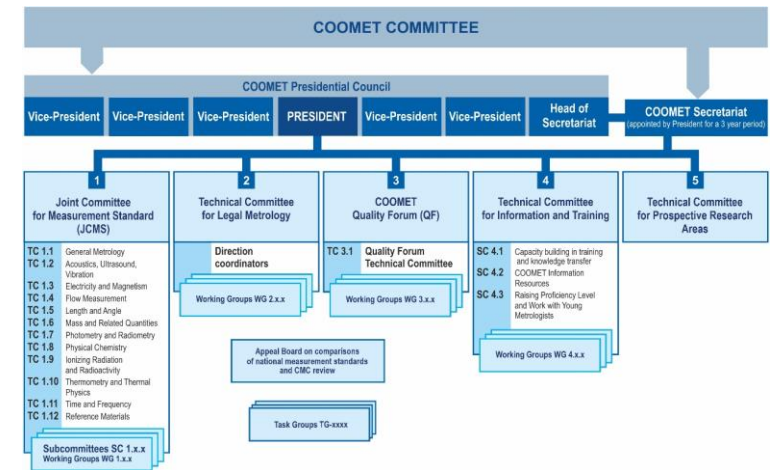
- Subcommittees (SCs) in order to address the permanent tasks of collaboration;
- Working Groups (WGs) within relevant SCs/TCs in order to carry out routine work on COOMET projects, as well as appoint field coordinators.

COOMET Presidential Council can initiate establishment of task groups (TG) within COOMET and determine their lifespans (membership of TGs is formed under COOMET projects).

Structural bodies and their CHAIRS (as of 19 September 2023)



JCMS		Nikita ZVIAGIN, VNIIM, RUSSIA
TC 1.1	GM	Anna CHUNOVKINA, VNIIM, RUSSIA
TC 1.2	AUV	Aleksandr ISAEV, VNIIFTRI, RUSSIA
TC 1.3	EM	Marina YARMOLOVICH, BelGIM, BELARUS
TC 1.4	F	Roman KORNEEV, VNIIR – branch of VNIIM, RUSSIA
TC 1.5	L	Konstantin CHEKIRDA, VNIIM, RUSSIA
TC 1.6	M	Ilya SHMIGELSKIY, VNIIM, RUSSIA
TC 1.7	PR	Anatoli BESCUPSCHI, INM-MD, MOLDOVA
TC 1.8	QM	Leonid KONOPELKO, VNIIM, RUSSIA
TC 1.9	RI	Nikolay MOISEEV, VNIIM, RUSSIA
TC 1.10	T	Petr KRIVONOS, BelGIM, BELARUS
TC 1.11	TF	Igor NORETS, VNIIFTRI, RUSSIA
TC 1.12	RM	Sergey MEDVEDEVSKIKH, VNIIM, RUSSIA
TC 2	LM	Marat YUNUSOV, UzNIM, UZBEKISTAN
QF		Nino MIKANADZE, GEOSTM, GEORGIA
TC 3.1	QF	Dina CHEPURNAYA, VNIIFTRI, RUSSIA
TC 4	IT/TR	Ainur RAKHADINOVA, KazStandard, KAZAKHSTAN
		Acting Chair from 19.09.2023
TC 5		Evgeny LAZARENKO, Rosstandart, RUSSIA



COOMET D1/2022:

*The scope of objectives, tasks and working and collaboration procedures of COOMET structural bodies (CSBs) is specified in relevant **Regulations approved by the COOMET Committee.***

*Each COOMET Structural Body is headed by a **Chair appointed by the COOMET Committee for a period of 4 years with the possibility to once extend the term of office for the same period.***

Fundamental documents:

COOMET D1 Memorandum of Understanding

COOMET D2 Rules of Procedure

COOMET Strategy for 2020-2025

COOMET P1 COOMET Development Program for 2023-2025



COOMET publications

To date 10 documents, 31 recommendations, 7 programs and 11 information materials have been registered in COOMET - they are all available on the information resources:

www.coomet.org, www.coomet.net

 **COOMET documents**

No	Document title	Registration number	Notes
1.	COOMET Memorandum of Understanding	COOMET D1/2022	
2.	COOMET Rules of Procedure	COOMET D2/2021	
3.	Memorandum on cooperation in development and application of reference materials of composition and properties of substances and materials within COOMET	COOMET D3/2008	Project 28/RU-a/92 381/BY/07
4.	Document COOMET Publications. Classification, Procedure for Development, Approval, Registration and Update.	COOMET D4/2022	Project 264/BY-a/02
5.	Document Model Regulations for COOMET Structural Bodies	COOMET D5/2021	Project 248/BY-a/02
6.	Document Procedure for Maintaining COOMET Website. General Provisions	COOMET D6/2013	Project 251/BY-a/02
7.	Document Regulation on Awarding the Distinguished Title "Honorary Metrologist of COOMET"	COOMET D7/2023	
8.	Document Criteria and Procedure of Admission for New COOMET Members	COOMET D8/2006	
9.	Document COOMET Web Portal. General Provisions and Maintenance	COOMET D10/2013	Project 500/UA-a/10
10.	Document The Procedure of Using the COOMET Logo	COOMET D11/2016	Project 631/UA-a/13

 **COOMET programs**

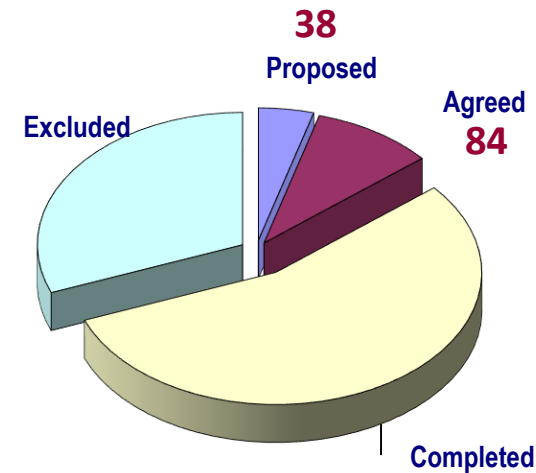
No	Program title	Registration number	Notes
1	COOMET Development Program for 2023-2025	COOMET P1/2023	Approved at the 34 th COOMET Committee meeting (23 to 24 May 2023)
2.	COOMET Program of comparisons	COOMET P2/2023	Approved at the 34 th COOMET Committee meeting (23 to 24 May 2023)
3.	Work Program of TC 2 "Legal Metrology" for 2021-2023	COOMET P3/2021	Prepared by TC 2
4.	Work Program of TC 4 "Information and Training" for 2021-2023	COOMET P4/2021	Prepared by TC 4
5.	Program of joint CRM production within COOMET for 2022-2024	COOMET P5/2022	project 186/RU/99
6.	COOMET Roadmap for the Implementation of Decisions Related to the Redefinition of the Basic Units of the International System of Units (SI) for 2020-2025	COOMET P6/2023	Approved at the 34 th COOMET Committee meeting (23 to 24 May 2023)
7.	COOMET Concept For The Issues Of Digital Transformation In Metrology	COOMET P7/2023	Approved at the 34 th COOMET Committee meeting (23 to 24 May 2023)

➔ All cooperation projects within COOMET are implemented in the form of **COOMET projects** or **events under the auspices of COOMET**.

COOMET projects are classified by the following areas (also with the indication of subject fields as given in COOMET D2/2021):

- ❖ Comparisons;
- ❖ Research;
- ❖ Advice and Training;
- ❖ Traceability and Calibration.

➔ **COOMET Work Program:**
a set of agreed COOMET projects



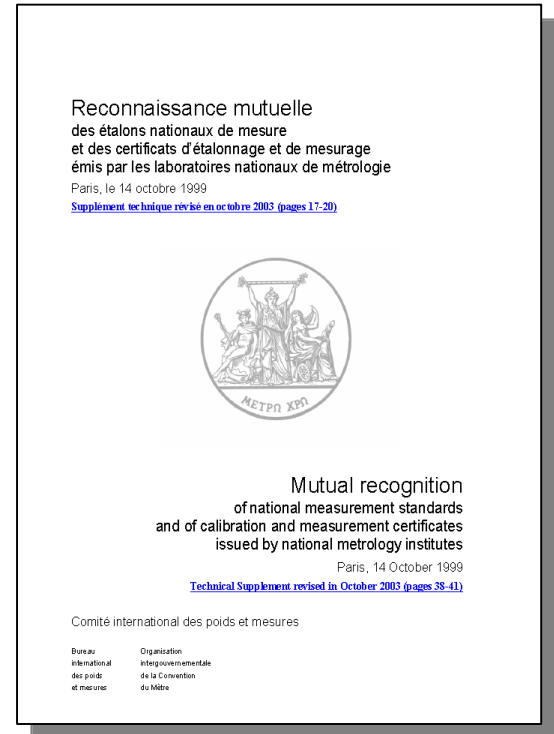
JCMS	
TC 1.1	GM
TC 1.2	AUV
TC 1.3	EM
TC 1.4	F
TC 1.5	L
TC 1.6	M
TC 1.7	PR
TC 1.8	QM
TC 1.9	RI
TC 1.10	T
TC 1.11	TF
TC 1.12	RM
TC 2	LM
QF/TC3.1	QF
TC 4	IT/TR
TC 5	

➔ **Participation in the implementation of the Mutual Recognition Arrangement (CIPM MRA)**

On 14 October 1999 an international document “Mutual Recognition Arrangement of national measurement standards and of calibration and measurement certificates issued by national metrology institutes (CIPM MRA)” was signed in Paris. The CIPM MRA accumulated all previous experience of international activities geared towards the implementation of provisions of the Metre Convention and formulated basic requirements and criteria for the recognition of the results of NMIs activities on measurements and calibration at the measurement standards level.

COOMET, as well as all RMOs, plays an important role in the CIPM MRA. In particular, RMOs:

- ❖ make proposals to the Consultative Committees on choosing key comparisons;
- ❖ conduct RMO key comparisons;
- ❖ participate in the **JCRB** (Joint Committee of RMOs and BIPM);
- ❖ conduct supplementary comparisons and carry out other activities geared towards supporting mutual confidence in the validity of calibration and measurement certificates issued by the institutes of the countries participating in the CIPM MRA.



JCRB: <https://www.bipm.org/en/committees/jc/jcrb/>

➔ **Implementation of the CIPM MRA**

Main objective

Provision of governments and other national bodies with a secure technical foundation for wider agreements related to international trade, commerce and development of regulatory documents.

Mechanisms for the implementation of the CIPM MRA

Key and supplementary comparisons of national measurement standards and operation of NMIs' quality management systems.

Results

Internationally recognized calibration and measurement capabilities of the NMIs (CMCs) declared on the international database (KCDB).

Compliance with the requirements of the CIPM MRA entitles NMIs to use special calibration certificates with the CIPM MRA logo.

Countries submitting their CMCs through COOMET:

- ❖ AZERBAIJAN,
- ❖ BELARUS,
- ❖ KAZAKHSTAN,
- ❖ CUBA*,
- ❖ RUSSIA,
- ❖ UZBEKISTAN

Note:

**Cuba participated in the implementation of the CIPM MRA from 2000, however since 01.01.2022 Cuban NMIs have not been signatories to those Arrangements.*

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



List of the NMIs having the right to use the CIPM MRA logo

COOMET: <https://www.coomet.net/organization/tc-1-joint-committee-for-measurement-standards/rules-and-procedures/certificates/>

BIPM: <https://www.bipm.org/en/cipm-mra/logo/>

COOMET recommendations (regulating activities on the implementation of the CIPM MRA)

No	Recommendation title	Registration number
1.	Procedure for an Intraregional Review of Calibration and Measurement Capabilities of COOMET NMIs and DIs and an Interregional Review of Calibration and Measurement Capabilities of NMIs and DIs of Other Regional Metrology Organizations	COOMET R/GM/7:2021
2.	Regulations on Comparisons of Measurement Standards of COOMET National Metrology Institutes and Designated Institutes	COOMET R/GM/11:2021
3.	Rules of Maintaining of the COOMET Program of Comparisons	COOMET R/GM/12:2021
4.	Guidelines for Data Evaluation of COOMET Key Comparisons	COOMET R/GM/14:2016
5.	Guideline on COOMET Supplementary Comparison Evaluation	COOMET R/GM/19:2016
6.	Rules of Completion of the Form of Calibration Certificates issued by National Metrology Institutes and Designated Institutes within the Scope of the CIPM MRA	COOMET R/GM/15:2020
7.	Recommendation on the Evaluation of Quality Management Systems of National Metrology Institutes/Designated Institutes	COOMET R/AQ/9:2019
8.	Rules and Procedure for the Evaluation of the Quality Management Systems of National Metrology Institutes/Designated Institutes	COOMET R/AQ/13:2019
9.	Temporary Rules and Procedure for Peer Reviews of Quality Management Systems of National Metrology Institutes/Designated Institutes (QMS of NMIs/DIs) During the COVID-19 Pandemic	COOMET R/AQ/34:2021

The texts of the recommendations are given at <https://www.coomet.net/publications/recommendations/>

➔ *Implementation of the CIPM MRA*

COOMET activities on the implementation of the CIPM MRA (**in terms of review and publication of CMCs and comparisons of measurement standards**) are coordinated by the Joint Committee for Measurement Standards (JCMS) and TC 1.1 – TC 1.12.



Chair of JCMS:
Nikita Zviagin (VNIIM, Russia)

COOMET projects on comparisons form the **COOMET Program of Comparisons (COOMET P2)**, which is updated and approved annually.

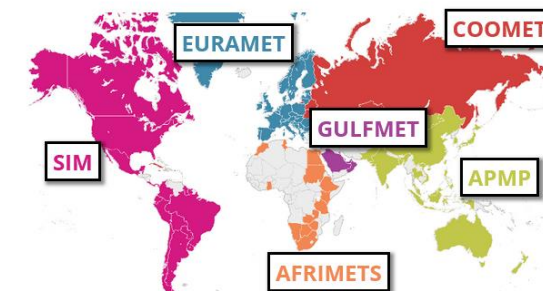
See [https://www.coomet.net/publications/programs/item 2. COOMET Program of Comparisons](https://www.coomet.net/publications/programs/item%202.%20COOMET%20Program%20of%20Comparisons) online

(as of 10 April 2023):

http://coomet.org/tc_prj/2023/D9_EN.htm

Statistics on the number of CMCs for each COOMET country is available at:

<https://www.bipm.org/kcdb/cmc/quick-search>



Currently in the KCDB there are

251 CIPM MRA participants **1155** key comparisons

25797 CMCs **675** supplementary comparisons

as of 20 July 2023

1
Joint Committee for Measurement Standards

- TC 1.1 General Metrology
- TC 1.2 Acoustics, Ultrasound, Vibration
- TC 1.3 Electricity and Magnetism
- TC 1.4 Flow Measurement
- TC 1.5 Length and Angle
- TC 1.6 Mass and Related Quantities
- TC 1.7 Photometry and Radiometry
- TC 1.8 Physical Chemistry
- TC 1.9 Ionizing Radiation and Radioactivity
- TC 1.10 Thermometry and Thermal Physics
- TC 1.11 Time and Frequency
- TC 1.12 Reference Materials

Subcommittees SC 1.x.x
Working Groups WG 1.x.x

➔ *Implementation of the CIPM MRA*

COOMET activities on the implementation of the CIPM MRA **(in terms of peer reviews of the quality management systems (QMS) of national metrology institutes and designated institutes)** are coordinated by the Quality Forum (QF) and TC 3.1 «Quality Forum Technical Committee».



Chair of QF:
Nino Mikanadze (GEOSTM, Georgia)



Chair of TC 3.1:
Dina Chepurnaya (VNIIFTRI, Russia)

Peer review of the quality management systems of COOMET NMIs/DIs (for compliance with ISO/IEC 17025:2017 and/or ISO 17034:2016) is conducted in 3 stages:

- 1) written presentation of the QMS within TC 3.1;
- 2) oral presentation of the QMS at the COOMET Quality Forum;
- 3) peer review of the QMS by the COOMET auditor and technical experts (in all types of measurements , in which CMCs are submitted).

The frequency of peer reviews is once every 5 years.

Positive results are certified by issuing a COOMET Confirmation of Recognition of the QMS for 5 years.

Information about the valid COOMET Confirmations of Recognition of the QMS is given on the QF page:

<https://www.coomet.net/organization/quality-forum-qf/confirmations-of-recognition-of-coomet-nmidis-qms/>

The task of the Joint Committee for Measurement Standards and TC 1.2-TC 1.12 **in the field of metrological traceability:**

- ❖ realization of the COOMET Roadmap for the Implementation of Decisions Related to the Redefinition of the Basic Units of the International System of Units (SI) (program COOMET P6).



See [https://www.coomet.net/publications/programs/](https://www.coomet.net/publications/programs/item%206)
item 6. COOMET Roadmap for the Implementation of Decisions Related to the Redefinition of the Basic Units of the International System of Units (SI) for 2020-2025



COOMET reference materials are reference materials (CRMs) of composition and properties of substances and materials developed jointly by the countries cooperating in COOMET, registered in the **Register of Reference Materials Developed Within COOMET** and allowed to be used by national metrology institutions of COOMET member countries.

Activities in the field of RMs are regulated by the Memorandum on cooperation in development and application of reference materials of composition and properties of substances and materials within COOMET (document COOMET D3/2008).

COOMET CRMs are freely used in COOMET member countries without further tests in bilateral and multilateral economic, scientific and technical cooperation.

The procedure for using COOMET CRMs in COOMET member countries is defined in accordance with the existing national normative legal acts and/or documents; in their absence - in accordance with COOMET publications.





COOMET activities **in the field of reference materials** are regulated, along with document COOMET D3, by the following recommendations (which are currently being updated):

No	Recommendation title	Registration number
1.	Procedure of Joint Development, Recognition and Registration of Reference Materials within COOMET	COOMET R/RM/4:2023
2.	Contents and Rules of Drawing Up Documents for RM Developed within COOMET	COOMET R/RM/5:2010
3.	Register of Reference Materials of Composition and Properties of Substances and Materials Developed within COOMET. Fundamentals	COOMET R/RM/6:2010
4.	Recommendation for Acceptance of Certified Reference Materials into Appendix C of the CIPM MRA	COOMET R/RM/16:2007
5.	Guidelines for Issuing Certificate of Participant of COOMET CRM Interlaboratory Certification	COOMET R/RM/17:2011
6.	Form and content of COOMET certificate for reference materials for composition and properties of substances and materials	COOMET R/RM/22:2020
7.	The Content and Procedure of Work on Reference Material Comparison within COOMET	COOMET R/RM/29:2016
8.	Procedure for completing the Form of COOMET database for COOMET reference materials	COOMET R/RM/30:2016



The following RMs can be recognized as COOMET CRMs:

- ❖ RMs developed jointly by several countries according to the preliminarily agreed requirements;
- ❖ RMs developed by one of COOMET member countries with participation of the countries interested in the certification of a reference material;
- ❖ RMs related to the implementation of the CIPM MRA and made available in the BIPM KCDB database.

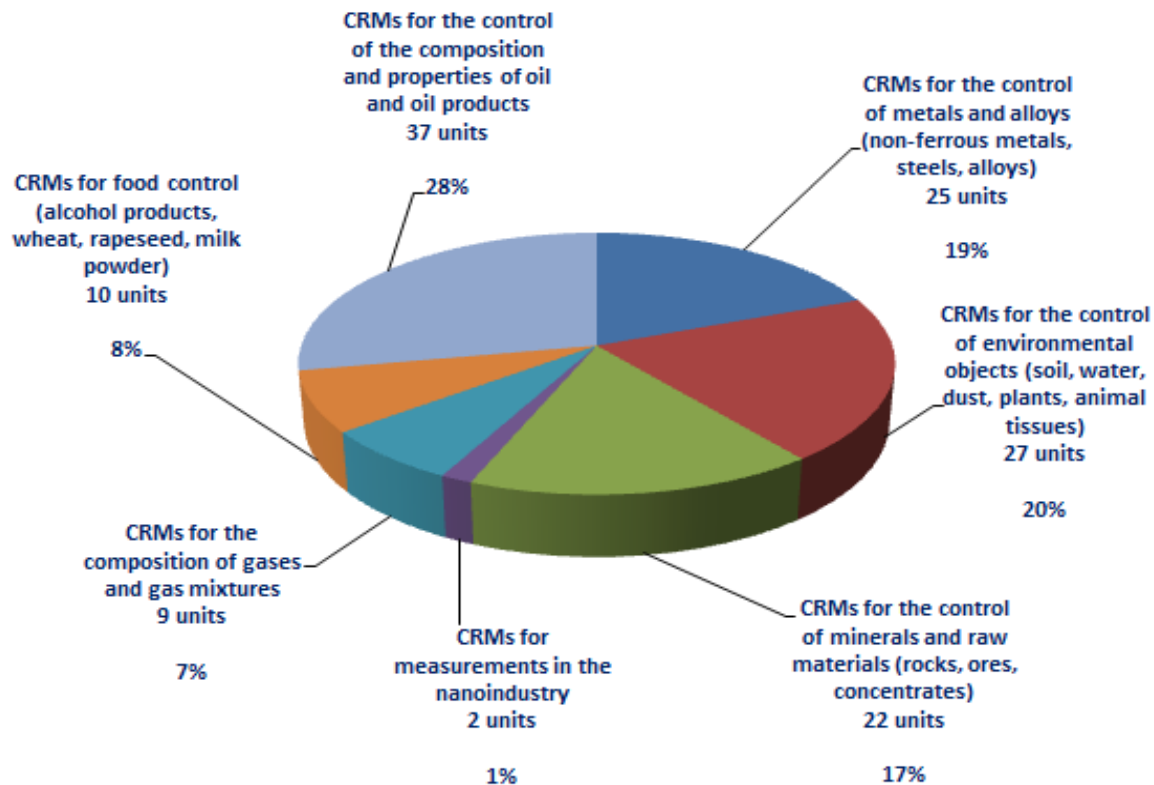
Only RMs, having the “state” status (certified or approved) in the country of the coordinator of the joint COOMET CRM development, or in the country of the RM development author with the involvement of other countries in its certification, are proposed as COOMET CRMs.

Development of COOMET CRMs is performed under agreed cooperation projects of the COOMET Work Program.

The procedure and methods for certification and other technological and methodological procedures used in development of COOMET RMs are defined in the corresponding technical documents agreed by the participants involved in the work.

Nomenclature of RMs in the Register of COOMET CRMs (as of 24 May 2023)

COOMET NOMENCLATURE OF CRMs
(a total of 132 COOMET CRMs types)



Total: **132 COOMET CRM types**

Country	Number of COOMET CRMs
BELARUS	5
BULGARIA	17
KAZAKHSTAN	13
RUSSIA	89
UKRAINE	8
total	132

➔ COOMET activities **in the field of legal metrology** are coordinated by TC 2 «Legal Metrology»



Chair of TC 2: Marat Yunusov
(UzNIM, Uzbekistan)

TC 2 tasks:

- ❖ formulation of proposals, development and implementation of the work program in LM;
- ❖ identification of cooperation problems in COOMET member countries in the field of LM;
- ❖ organization and performance of joint works in LM, which are of interest to national metrology institutions of COOMET member countries;
- ❖ establishment of interaction with the working bodies of OIML and RLMO, formulation of proposals on joint work with those organizations;
- ❖ analysis of OIML and RLMO publications for their implementation in COOMET member countries (in case of interest);
- ❖ preparation of COOMET publications on the issues of legal metrology;
- ❖ participation in the monitoring of demand for training events within COOMET in the area of responsibility of TC2; organization and holding of training events of COOMET on topical issues of legal metrology etc.



Work Program of TC 2 is approved once every 3 years and updated annually.

See [https://www.coomet.net/publications/programs/item 3. Work Program of TC 2 "Legal Metrology"](https://www.coomet.net/publications/programs/item 3. Work Program of TC 2)



Currently the following OIML publications are being translated into Russian:

OIML D 5:2022, ILAC-G24/OIML D 10:2007, OIML D 11:2013, OIML D 33:2019, OIML R 75-3:2006, OIML R 125:1998, International vocabulary of terms in legal metrology VIML (2022) .



The below COOMET recommendations **in the field of legal metrology** are being updated



No	Recommendation title	Registration number
1.	Layout, Presentation, Drawing Up and Contents of Measuring Instrument Type Specifications for National Register of Measuring Instruments	COOMET R/LM/8:2002
2.	Procedure for recognizing technical devices as measuring instruments	COOMET R/LM/25:2015

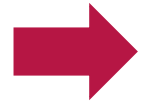


The below COOMET projects are being implemented

716/BY-a/17 “Development of rules for setting up reverification and recalibration intervals for measuring instruments used in the field of legal metrology”;

778/UA-a/19 “Development of COOMET Recommendation "Metrological control of measuring information systems. The main provisions”;

827/RU/21 “Translation of the UNIDO-OIML Brochure "Certification of measuring instruments".



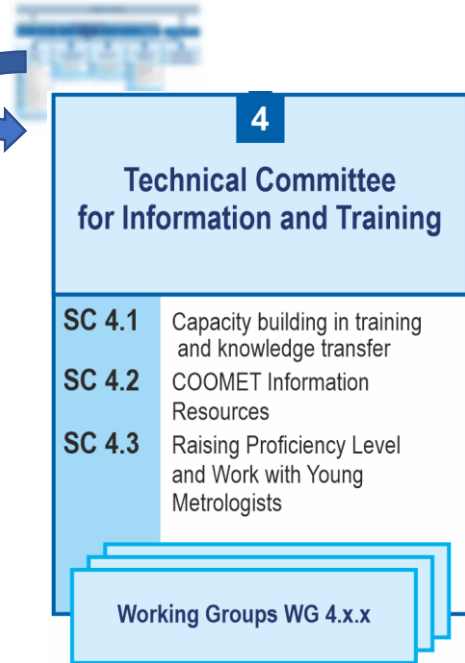
COOMET activities **in the field of information and training** are coordinated by TC 4 «Information and Training»



Acting Chair of TC 4: Ainur Rakhadinova
(KazStandard, Belarus)

TC 4 tasks:

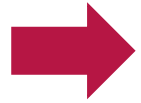
- ❖ organization, development and activation of cooperation of COOMET member countries in the field of information and training;
- ❖ promotion/popularization of the activities and significance of COOMET at the national and international levels;
- ❖ organization of information activities and presentation of the outcomes of cooperation on the COOMET web resources;
- ❖ coordination of cooperation among representatives of national metrology institutions and other national organizations of COOMET member countries in the fields of information and training;
- ❖ identification of needs and resources, coordination of work and support of activities on capacity building in training and knowledge transfer;
- ❖ monitoring of the need for training events and internships within COOMET, BIPM CBKT and programs of other partners;
- ❖ annual organization and holding of several training events under the auspices of COOMET.



Work Program of TC 4 is approved once every 3 years and updated annually.

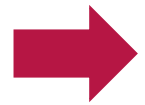
See [https://www.coomet.net/publications/programs/item 4. Work Program of TC 4 "Information and Training"](https://www.coomet.net/publications/programs/item 4. Work Program of TC 4)

Information about the planned **training events of COOMET** is published at: <https://www.coomet.net/activities/coomet-events/>



TYPES of COOMET ACTIVITIES in knowledge transfer:

- seminar;
- training course of theoretical nature (training course);
- traineeship;
- COOMET course on the BIPM e-learning platform;
- International competition "Best Young Metrologist of COOMET".



International Competition «The Best Young Metrologist of COOMET»

The Competition is held **once every two years** in one of the metrological institutions of COOMET member countries. The venue for the competition is chosen based on the proposals from COOMET Committee members.

Information about the exact dates and venue of the Competition is made available on the COOMET web resources and provided to COOMET member institutions **no later than one year** before the date of the Competition. Generally, the Competition is held jointly with a scientific and practical conference on metrology issues.

Representatives of other RMOs take part in every second Competition.

The Competition is held in accordance with recommendation COOMET R/GM/18:2022 “Procedure for the International Competition "The Best Young Metrologist of COOMET“ under the auspices of TC 4.



VI Competition
17 to 18 June 2015
Ukrmetrteststandart, Kiev,
Ukraine



VII Competition
17 to 18 May 2017
KazInMetr, Astana, Kazakhstan



VIII Competition
5 to 6 June 2019
VNIIR, Kazan, Russia



IX Competition
21 to 22 April 2021
online



X Competition
14 June 2023
Yekaterinburg, Russia, & online



Actions are carried out **to organize training events under the auspices of COOMET:**

- ❖ Preparation of an internal procedure for the assessment of training needs and planning of training activities within COOMET (COOMET project 829/BY-a/21).
- ❖ Conduct of a survey on the needs of COOMET members in training seminars on the topical issues of metrology in different subject areas of cooperation and on the available resources/possibilities for holding training seminars in COOMET NMIs/DIs.
- ❖ Preparation of Plans for training activities of COOMET.
- ❖ Organization and holding of training activities on the topical issues of metrology in different subject fields of cooperation for experts of NMIs/DIs of COOMET member countries and monitoring of their performance.
- ❖ Coordination of participation of experts from NMIs/DIs of COOMET member countries, especially from countries and economies with emerging metrology systems (CEEMS), in training activities, performed under the BIPM CBKT program and programs of other partners.
- ❖ Organization and implementation of online/e-learning through COOMET web resources and/or existing e-learning modules of other organizations – it has been implemented through signing of the **Practical Arrangement between the BIPM and COOMET on cooperation in delivering capacity building and knowledge transfer activities using the BIPM e-learning platform**

4 Technical Committee for Information and Training	
SC 4.1	Capacity building in training and knowledge transfer
SC 4.2	COOMET Information Resources
SC 4.3	Raising Proficiency Level and Work with Young Metrologists

Working Groups WG 4.x.x

➔ Preparation of **training courses for the COOMET sector** on the BIPM e-learning platform and involvement of a maximum number of specialists from COOMET member countries in the courses



- About the CBKT
- KCDB help page
- What is New?
- BIPM YouTube
- OIML e_Learning

 Bureau International des Poids et Mesures BIPM COURSES	 ALL COURSES	 APMP COURSES
 COOMET COURSES	 EURAMET COURSES	 GULFMET COURSES

COOMET
Home / Courses / COOMET

PROVIDER

- BIPM
- COOMET
- EURAMET
- GULFMET
- APMP

TOPIC AREA

- Quality Infrastructure
- CIPM MRA
- Miscellaneous
- Mass and Related Quantities
- Chemistry and Biology
- Ionizing Radiation
- Thermometry
- Time and Frequency
- Measurement uncertainty

COURSE ACCESS

- Open
- Restricted

LANGUAGE

- English
- Russian

3 results

- Information about COOMET activities
- Договоренность о взаимном признании СИРМ
- Информация о деятельности COOMET



<https://e-learning.bipm.org/>

COOMET
ЕВРОАЗИАТСКОЕ СОТРУДНИЧЕСТВО ГОСУДАРСТВЕННЫХ МЕТРОЛОГИЧЕСКИХ УЧРЕЖДЕНИЙ

СЕРТИФИКАТ

Настоящий сертификат удостоверяет, что
Марат Юнусов,
Республика Узбекистан

прошел курс COOMET на электронной обучающей платформе BIPM с положительным результатом проверки полученных знаний на тему:
"Договоренность о взаимном признании СИРМ MRA"

В программе курса рассмотрены вопросы:

- Модуль 1: Что такое Договоренность СИРМ MRA и для кого она актуальна?
- Модуль 2: Сличения в рамках СИРМ MRA;
- Модуль 3: Система менеджмента качества в рамках СИРМ MRA;
- Модуль 4: Калибровочные и измерительные возможности (СМС);
- Модуль 5: Экспертиза СМС;
- Модуль 6: Метрологическая прослеживаемость.

23 августа 2022 г.
ОНЛАЙН

д.т. Анна Чуновкина,
председатель ТК 1.1
"Общая метрология"

Ольга Шемагонова,
координатор курса,
Секретариат COOMET

➔ Drawing up of a list of fundamental documents on metrology of international metrology organizations and organization of their translations into Russian (project COOMET 872/RU/23).

➔ COOMET recommendation is being updated.

4

**Technical Committee
for Information and Training**

SC 4.1	Capacity building in training and knowledge transfer
SC 4.2	COOMET Information Resources
SC 4.3	Raising Proficiency Level and Work with Young Metrologists

Working Groups WG 4.x.x

No	Recommendation title	Registration number
1.	Educational programs and practical training programs of experts of National Metrological Institutes cooperating in COOMET	COOMET R/IT/24:2014

➔ Work is being carried out on creating a new single information resource of COOMET.



COOMET activities **in the field of research** are coordinated by TC 5 “Prospective Research Areas”

(the TC was reactivated in 2022 for the implementation of Task F of the COOMET Strategy for 2020-2025 , however, full-scale work under Task F was suspended owing to the lack of COOMET’s own financial resources).



Chair of TC 5:
Evgeny Lazarenko
(Rosstandart, Russian Federation)



Works are planned within TC 5 on the identification and implementation of prospective areas of research in metrology; efforts will primarily be concentrated on the implementation of scientific projects (involving NMIs of COOMET member countries) related to the redefined SI units.

The possibility of resuming full-scale research will be assessed in the preparation of a draft COOMET Strategy for 2026-2031.



A COOMET Task Group for Digital Transformation in Metrology was established.

(project 825/RU-a/21 "Development of the COOMET concept on digitalization in the field of metrology")

Chair of Task Group



Mr. Andrey Pankov

All-Russian Scientific Research Institute for Metrological Service
(VNIIMS)
Address: 46 Ozernaya Str., 119361 Moscow, Russia
Phone: +7 495 781 24 50
Email: apankov@vniims.ru



The **COOMET Concept For The Issues Of Digital Transformation In Metrology** was approved by the COOMET Committee as program COOMET P7/2023.

The Concept covers the following aspects:

- ❖ review of electronic documents in metrology and formulation of requirements to their formats and structure;
- ❖ use of FAIR+T data;
- ❖ use of digital technology in COOMET activities;
- ❖ use of cloud and grid technology in metrology in COOMET member countries;
- ❖ development of recommendations on the structure and requirements to the digitalization objects that are component parts of the digital platforms of COOMET member countries;
- ❖ development of common approaches to the creation and maintenance of national information funds in the field of ensuring the uniformity of measurements in COOMET member countries.



In 2023 work has commenced on the COOMET projects according to the actions provided for in the **Roadmap for the Implementation of the COOMET Concept For The Issues Of Digital Transformation In Metrology**, inter alia in terms of preparing COOMET recommendations that establish the structure of and requirements for:

- ❖ digital document repositories in COOMET member countries;
- ❖ digital classifier of measuring instruments and digital descriptions of cards of measuring instrument groups in COOMET member countries;
- ❖ **digital calibration certificates for measuring instruments in COOMET member countries;**
- ❖ information and communication infrastructure to ensure the information security of the COOMET digital platform.



COOMET criteria for COOMET member countries to be classified as countries with emerging metrology systems (CEEMS) were identified:

- ❖ lack of the status of the "Member of the Metre Convention" or "CGPM Associate" of the country;
- ❖ lack of published CMC entries;
- ❖ non-participation in key or supplementary comparisons, registered in the KCDB.

Countries which decided to be classified as CEEMS:

- ❖ ARMENIA,
- ❖ KYRGYZSTAN,
- ❖ TAJIKISTAN,
- ❖ UZBEKISTAN.

Main actions (2022-2023):

1. A preliminary survey was conducted among COOMET Committee members on possible ways to support CEEMS and/or possible contribution of COOMET member countries.
2. A survey among CEEMS was conducted to identify required activities to assist the specific country.
3. A survey was conducted among COOMET Committee members from COOMET member countries to identify the possibilities to assist CEEMS (in view of their needs).
4. Possible actions of the COOMET Program to support CEEMS are being discussed.

 A **COOMET Task Group for CEEMS support (TG-CEEMS)** was established
(project 870/KZ/23 «Development and implementation of the COOMET Plan of Action to assist CEEMS»)



Chair of TG-CEEMS:
Bauyrzhan Mukhamedzhanov
(KazStandard, Kazakhstan)

The following tasks of the TG-CEEMS were defined:

- ❖ organization of comparisons for standards of CEEMS' NMIs, taking into account their needs;
- ❖ carrying out of calibrations of standards of CEEMS' NMIs to ensure traceability;
- ❖ holding of trainings (seminars, courses, including those on the e-learning platform, traineeships) for CEEMS specialists;
- ❖ provision of information support at the request of the members of the COOMET Committee from CEEMS.

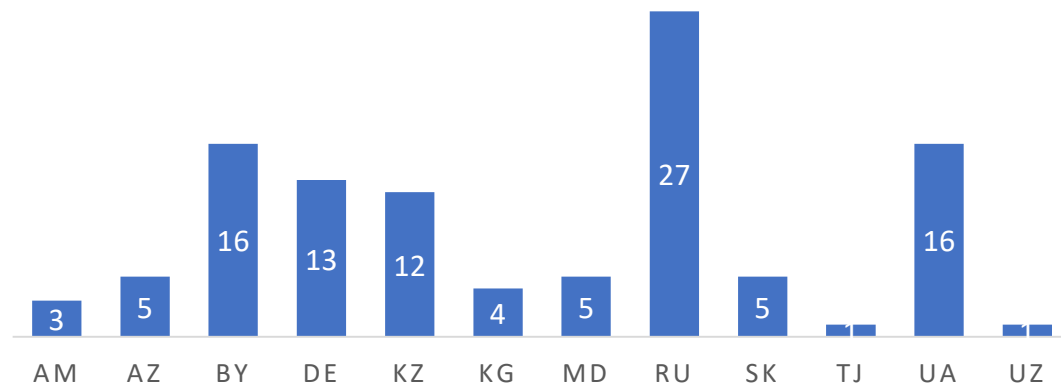
AIM: more active involvement of specialists of CEEMS' NMIs in the activities of COOMET structural bodies and projects



The distinguished title "Honorary Metrologist of COOMET" is given to active participants of cooperation within COOMET and is an acknowledgement of their high professionalism and an encouragement for the achievements and personal contribution in the development and improvement of COOMET activities.

The procedure for giving the title is regulated by document COOMET D7/2023 "Regulation on Giving the Distinguished Title of "Honorary Metrologist of COOMET".

Number of specialists of COOMET member countries, who were awarded the distinguished title





COOMET is open for cooperation with the BIPM, OIML, all regional metrology organizations and regional legal metrology organizations


On 12 August 2018 a **MEMORANDUM of Understanding between COOMET and EURAMET** was signed, by which the countries confirmed their intention to cooperate in the following areas of mutual interest:


- research in metrology;
- traceability of measurements to the SI units;
- inter-laboratory comparisons;
- knowledge exchange;
- joint publications.






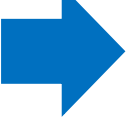


On 07 December 2006 a **PROTOCOL of Cooperation and Interaction in the Field of Metrology Between COOMET And EASC was signed**, providing for coordination of joint projects in terms of:

- preparation of normative and technical documents that regulate development and application of reference measurement procedures (methods);
- implementation of the CIPM MRA, including assessment of quality management systems according to the requirements of ISO/IEC 17025;
- development and use of reference materials for composition and properties of substances and materials compliant with the relevant international standards;
- implementation of calibration and measurement uncertainty assessment;
- comparisons of state measurement standards;
- formulation of regional policy for metrological traceability;
- professional training in the field of metrology, organization of conferences, seminars, workshops, traineeships etc.

-  **Implementation of the COOMET Strategy for 2020-2025 and COOMET Development Program. Effective implementation of projects in all fields of activities provided for in the COOMET Memorandum of Understanding**

-  **Dealing with the issues of the institutional status**
 - (1) assessment of the possibility of establishing COOMET as a legal entity or appropriateness of gaining another status for COOMET;**
 - (2) assessment of the feasibility of COOMET transformation to an "Association of NMIs/DIs";**
 - (3) assessment of the possibility of establishing a permanent Secretariat.**

-  **Dealing with the issues of funding of COOMET activities**

-  **Development of cooperation with countries with emerging metrology systems**
-  **Development of the field «Prospective Research Areas»**
-  **Performance of a range of works on digital transformation in metrology**
-  **Strengthening of relations with international and regional metrology organizations**
-  **Popularization of the activities and significance of COOMET**



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COOMET web-portal (www.coomet.net)

COOMET website (www.coomet.org)