

ANNUAL REPORT of COOMET TC 4 “Information and Training” for 2022

1 GENERAL CHARACTERISTICS OF COOPERATION, including information about the implementation of the COOMET Strategy, COOMET Development Program and Work Program of TC 4

Representatives of the following COOMET member countries take part in TC 4 activities: Azerbaijan, Armenia, Belarus, Bulgaria, Germany, Georgia, Kazakhstan, China, Cuba, Kyrgyzstan, Moldova, Russia, Tajikistan, Uzbekistan, Ukraine.

Since in October 2022 a notification was received from the Ministry of Economy of Ukraine of the suspension of participation in CSB activities, the Acting TC 4 Chair (Pavel Neyezhmakov, Ukraine) and Chair of SC 4.1 "Capacity Building in Training and Knowledge Transfer" (Yuliya Bunyaeva, Ukraine) could not further perform their duties.

The COOMET Presidential Council appointed the Head of COOMET Secretariat Nadezhda Liakhova the Acting TC 4 Chair from 15.10.2022. N.Liakhova organized a TC 4 meeting (on 1 December 2022), where elections of new TC 4 and SC 4.1 Chairs were planned. The elections were not held owing to the absence of candidatures from countries. The elections will be held again at the next TC 4 meeting in 2023. The Presidential Council extended the term of office of N.Liakhova as the Acting TC 4 Chair until the end of 2023. The COOMET Secretariat will continue the coordination of issues related to the organization of COOMET training activities.

There are three subcommittees functioning in TC 4:

- SC 4.1 “Capacity Building in Training and Knowledge Transfer” (former Chair - Yuliya Bunyaeva, NSC "IM", Ukraine);
- SC 4.2 “COOMET Informational Resources” (former Chair – Aleksandr Ivanov, VNIIFTRI, Russia);
- SC 4.3 “Raising Proficiency Level and Work with Young Metrologists” (Chair – Ekaterina Kozmina, VNIIMS, Russia).

Given the decision of the Russian Federation to transfer the maintenance of the COOMET website (www.coomet.org) from VNIIFTRI to VNIIMS, it was decided at the TC 4 meeting to appoint the new website administrator Ilya Krasavin (VNIIMS, Russia) the Chair of SC 4.2 based on the application from the COOMET Committee member from Russia, COOMET Vice-President Evgeny Lazarenko. The decision was endorsed by the COOMET Presidential Council and will be submitted for approval to the COOMET Committee.

TC 4 in conjunction with the COOMET Secretariat continuously provides management and maintenance of the COOMET web site (www.coomet.org), as well as the COOMET data server (DB of COOMET projects, DB of COOMET comparisons, DB of COOMET CRMs, etc.). Information is posted on the COOMET web portal (www.coomet.net) by the COOMET Secretariat and online editors of COOMET structural bodies.

Note: DB on CMCs is temporarily not being maintained.

In 2022 a TC 4 representative took part in the activities of the COOMET Task Group for Digital Transformation in Metrology (TG-DigTr).

In 2022-2023 the Working Group for the Creation of a New Single Information Resource of COOMET (WG-Web) has continued its activities –the Terms of References for the creation of a new web resource is currently under discussion.

During the reporting period, work within the TC was performed in accordance with the Work Program of TC 4 for 2021-2023.

In 2022-2023 a number of activities, provided for in the COOMET Development Program for 2020-2022 and program COOMET P4/2021, have been discussed and implemented, namely:

- 54. (Ind-e.2.4), 55. (Ind-e.3.1): discussion of a format for monitoring actual traineeships of experts of NMIs/DIs of COOMET member countries and monitoring of CEEMS participation in training activities and traineeships within COOMET, BIPM CBKT programs and programs of other partners- under COOMET project 829/BY-a/21 (see section 2);
- 95. (Ind-g.3.4): drawing up of a list of fundamental documents on metrology of international metrology organizations for which translation into Russian is required – under COOMET project 872/RU/23 (see section 3); the COOMET Secretariat translated into Russian the CIPM MRA Brochures of the BIPM. The translation is available on the COOMET portal: <https://www.coomet.net/ru/publikacii/perevody-na-russkii-jazyk/mkmv/mbmv/>
- 79. (Ind-g.2.6): inspection of the scientific and technical level of COOMET documents and recommendations in the field of TC 4 activities (D6/2013, D10/2013, D11/2016, R/IT/24:2014, R/IT/27:2015) and their update (see section 2).

Note: the scientific and technical level of D6/2013 and D10/2013 was not inspected, owing to the commencement of work on the creation of a new COOMET web resource, for which the appropriate documentation will be prepared. After the commissioning of the web resource and stopping of the web site and web portal maintenance, documents D6/2013 "Procedure for Maintaining COOMET Website. General Provisions" and D10/2013 "COOMET Web Portal. General Provisions and Maintenance" will be cancelled.

Information about the implementation of other indicators of the COOMET Development Program for 2020-2022 is given in section 2.

An annual survey is conducted under the auspices of TC 4 on the needs of COOMET members in training seminars on the topical issues of metrology in different subject fields of cooperation and on the available resources/possibilities to hold training seminars in COOMET NMIs/DIs. A Plan for COOMET training activities for 2023-2024 was prepared based on the survey conducted in 2022, published on the COOMET web resources, and it is updated as required.

2 OVERVIEW OF IMPLEMENTED PROJECTS AND THEIR RESULTS

In 2022 work was conducted on the following registered projects:

543/RU-a/11 Development and administration a database of RM of COOMET

Ongoing joint project of TC 1.12 "Reference Materials" and TC 4 "Information and Training". The aims of the project are to collect and examine data on the reference materials of COOMET, publish them on the website as a database, maintain and update the database. 132 types of COOMET CRMs have currently been registered in the database.

829/BY-a/21 Preparation of an internal procedure for the assessment of training needs and planning of training activities within COOMET (coordinator – BelGIM, Belarus)

The project was originally initiated by Ukraine. Under the project, preparation of an internal procedure began, including a questionnaire on the needs of COOMET members in training seminars on the topical issues of metrology in different subject fields of cooperation and on the available resources/possibilities to hold training seminars in COOMET NMIs/DIs.

The COOMET Secretariat undertook the completion of work under the project. A draft COOMET recommendation was prepared with the scope extended (the following issues were also included: (1) monitoring of actual traineeships involving specialists from NMIs of COOMET member countries, (2) monitoring of CEEMS participation in training activities and traineeships within COOMET, BIPM CBKT programs and programs of other partners, and (3) assessment of the participants satisfaction). The draft recommendation was sent to TC 4 members for review; then review by the Chairs of CSB and TG-CEEMS will be organized.

Work is carried out according to item 44 of the COOMET Development Program for 2020-2022 (Ind-e.1.1).

860/RU/22 Update of document COOMET R/IT/24:2014 "Educational programs and practical training programs of experts of National Metrological Institutes cooperating in COOMET" (coordinator – VNIIMS, Russia)

Under the project, a draft updated recommendation was prepared (with the designation and title refined: COOMET R/TR/24 "Programs of COOMET trainings. Requirements for the content and design. Preparation and approval procedure"). The draft is currently under discussion with TC 4 members; then review by CSB Chairs will be organized. The work is performed according to item 79 of the COOMET Development Program for 2020-2022 (Ind-e.2.6).

861/BY-a/22 Update of recommendation COOMET R/IT/27:2015 "Procedure for preparing certificates of training, study visits and up-skilling within the framework of COOMET" (coordinator – BelGIM, Belarus)

Under the project, a draft updated recommendation was prepared (with the designation and title refined: COOMET R/TR/27 "Procedure for preparing certificates issued based on the results of trainings within COOMET"). The sections containing requirements for the content of the certificates and procedure for drawing them up and signing were also substantially revised, and new provisions with regard to keeping records of the issued certificates were added. The draft was discussed with TC 4 and CSB members. The draft was endorsed by the COOMET Presidential Council and is submitted to the COOMET Committee for approval. The work was performed according to item 79 of the COOMET Development Program for 2020-2022 (Ind-e.2.6).

In agreement with the Presidential Council, COOMET certificates (in accordance with the form proposed in the updated recommendation) were issued for the students of the COOMET course "CIPM MRA" on the BIPM e-learning platform.

853/BY-a/22 Update of document COOMET D11/2016 "The Procedure of Using the COOMET Logo" (coordinator – BelGIM, Belarus)

The project was originally initiated by Ukraine in conjunction with the COOMET Secretariat.

The COOMET Secretariat undertook the completion of work under the project. Currently the collection of proposals from TC 4 members on the refinement of the document content was organized. The updated version will be sent for review to TC 4 members in 2023, and then to all CSBs.

In 2022 the following projects were completed:

1) **731/BY-a/17** "Review of national education & training systems for the NMIs and metrologists of the COOMET member countries"; participants: BY, AZ, KG, KZ, RU, UA, UZ. An information material "Training systems for metrologists in COOMET member countries" was approved by the COOMET Committee as COOMET I/TR/12:2022.

2) **811/BY-a/20** "Development of the policy and procedures for holding official COOMET meetings and events under the auspices of COOMET in the form of videoconferences/webinars based on the organization and holding of test (pilot) videoconferences involving experts from COOMET member countries"; participants: BY, DE, KZ, RU, TR, UA. Instructions were prepared for participants of a COOMET videoconference/webinar, containing recommendations for joining, software and technical (computer) equipment to be used, working arrangements of videoconferences/webinars, organization of polling to make decisions during meetings/events, as well as for providing simultaneous translation into the working languages of COOMET. The instructions have been used in holding COOMET videoconferences/webinars during 2020-2023.

3. RESULTS OF THE TC MEETING

The 19th meeting of TC 4 "Information and Training" was held on 1 December 2022 online.

The meeting was attended by representatives of 9 COOMET member countries: Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, China, Cuba, Russia, Tajikistan, Uzbekistan. The following main issues were considered at the meeting:

- brief report about the activities of TC 4 in 2021-2022;
- about the state of the COOMET information resources;

- about the implementation of the TC 4 Work Program for 2021-2023 (COOMET P4/2021) in view of the COOMET Development Program for 2020-2022 (in the area of responsibility of TC 4);
 - about the preparation of an internal procedure for the assessment of training needs and planning of training activities within COOMET;
 - about the results of the survey among COOMET Committee members on possible options to enhance cooperation (with regard to training events);
 - about the performance of training activities, envisaged by the Plan of training activities of COOMET for 2022; about a draft Plan of training activities of COOMET for 2023-2024; about the monitoring of training activities and participation in them;
 - about drawing up of a list of fundamental documents on metrology of international metrology organizations requiring translations into Russian;
- about preparations for the X International Competition "Best Young Metrologist-2023" (14 to 16 June 2023, Ekaterinburg, Russia);
- about COOMET publications (Update of document COOMET D11/2016, recommendation COOMET R/IT/24:2014, recommendation COOMET R/IT/27:2015);
- COOMET activities within the framework of the BIPM e-learning platform;
- election of the TC 4 Chair. About the office of SC 4.1 and SC 4.2 Chairs.

The meeting resolutions are reflected in this report.

** Note: a COOMET project was registered in 2023: 872/RU/23 "Drawing up of a list of basic documents on metrological issues, developed by international metrology organizations, requiring translation into Russian", and the collection of proposals from countries has begun. Information about the project implementation, including the list of documents, proposed for translation, and a tentative schedule of works will be presented at the next TC 4 meeting.*

4. TRAINING ACTIVITIES

4.1 In 2022 a **webinar** "Approaches to processing inconsistent data of comparisons" was organized and held (on 10 November 2022). Representatives of 10 COOMET member countries (Azerbaijan, Armenia, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, and Uzbekistan) took part in the webinar.

Other training activities were rescheduled for 2023.

Information about the held training activities is available on the COOMET web portal at <https://www.coomet.net/activities/information-and-training/information-about-past-training-activities/>.

4.2 One of TC 4 tasks is **coordination of participation of specialists from NMIs of COOMET member countries**, especially from countries with emerging metrology systems (CEEMS), **in training activities realized under the BIPM CBKT Program and programs of other partners.**

In 2022 specialists from NMIs of COOMET member countries took part in the following activities:

- KCDB 2.0 – TC Chairs in Chemistry and Biology, 26 January 2022, online (participants – RU);
- KCDB 2.0 – Comparisons, 8 February 2022, online (participants – AZ, GE, KG, KZ, RU, UA, UZ);
- KCDB 2.0 – CMC-Writers-GP, 15 March 2022, online (participants – AZ, GE, KG, KZ, RU, UZ);
- KCDB 2.0 – CMC-Writers-IR, 18 March 2022, online (participants – AZ, GE, KG, UZ);
- KCDB 2.0 – TC Chairs, 16 June 2022, online (participants – RU, UA);
- KCDB 2.0 – CMC Writers in Chemistry and Biology, 10 October 2022, online (participants – AZ, BY, KZ, RU, UZ);
- GULFMET, 6-9 June 2022 (participants – UZ);
- TÜBİTAK UME Project Placement, September – November 2022 (participants – Dr Milica Krajišnik (IMBIH, BA), Mr Zhuldyz Saden (KazStandart), KZ).

4.3 COOMET activities within the framework of the BIPM e-learning platform (см. <https://e-learning.bipm.org/>) are implemented through the special COOMET sector. The work was performed based on the Practical Arrangement between the BIPM and COOMET on cooperation in delivering capacity building and knowledge transfer activities using the BIPM e-learning platform, signed in early 2022.

To date two COOMET sector administrators (representatives of KazStandard, Kazakhstan, and COOMET Secretariat) and course creators, who completed the training, have been appointed.

Three courses were made available on the platform in the COOMET sector in 2022 (course "Information about COOMET activities" (in Russian and in English) and course "CIPM MRA" (in Russian).

Students can also view open courses of the BIPM (for example, "CIPM MRA" in English etc.) or courses of other RMOs.

At CSB meetings in 2022 creation of COOMET courses on subjects within the area of responsibility of CSBs was discussed. The work will continue in 2023.

A draft COOMET recommendation "Rules for creation, approval and update of COOMET courses on the BIPM e-learning platform. Monitoring and satisfaction assessment for participation in COOMET training courses" was prepared by the COOMET Secretariat in conjunction with the specialists from KazStandard (the preparation was in line with the requirements of the abovementioned Arrangement).

The draft recommendation defines the rules for creating, agreeing on, approving and updating COOMET courses, and provides for the procedure for monitoring COOMET courses and assessing the satisfaction of participation in courses.

The draft was reviewed by TC 4 and CSB members, endorsed by the COOMET Presidential Council and will be submitted to the COOMET Committee for approval.

5. PREPARATIONS FOR THE X INTERNATIONAL COMPETITION "BEST YOUNG METROLOGIST OF COOMET"

The X International Competition "Best Young Metrologist of COOMET" will be held on 14 June 2023, in Yekaterinburg, Russia.

In 2022-2023 applications were collected from COOMET member countries for participation (applications were submitted from Armenia, Belarus, Kazakhstan, Russia and Uzbekistan), and the Scientific Committee of the Competition was formed.

6. ISSUES OF INTERACTION WITH INTERNATIONAL AND REGIONAL ORGANIZATIONS IN THIS FIELD OF COOPERATION

The interaction of TC 4 with international organizations is realized through the coordination of participation of NMI representatives from COOMET countries in the BIPM CBKT programs (see 4.2 of the report).

In 2022 there were no interactions of TC 4 with regional organizations.

Note: in 2021 TC 4 representatives took part in the annual meeting of the EURAMET Technical Committee for Interdisciplinary Metrology (TC-IM) on 25 March online.

Information about the participation of COOMET representatives in the meetings of international and regional organizations is given in the Annual Report on COOMET activities for 2022.

7. WORK ON THE INFORMATION SUPPORT OF THE CIPM MRA

Information about the CIPM MRA implementation in COOMET member countries is posted on the pages of www.coomet.net and www.coomet.org.

To ensure the implementation of the CIPM MRA by COOMET structural bodies on an ongoing basis, the database of COOMET comparisons is maintained, alongside with drawing up and monitoring of the implementation of the COOMET Program of Comparisons online on the COOMET website.

Note: DB on CMCs is temporarily not being maintained.

The number of COOMET key and supplementary comparisons, the number of completed and published COOMET comparisons, the number (and percentage) of piloted COOMET comparisons by COOMET NMIs/DIs were analyzed within JCMS involving TC 4 as part of the report on the implementation of the Program of Comparisons and indicators of the COOMET Development Program for 2020-2022 to the COOMET Presidential Council.

8. NEXT TC 4 MEETING

The next 20th meeting of TC 4 is scheduled for the period from 9 to 13 October in Uzbekistan.

The online format of the meeting is an alternative option (in case of force majeure).

The final decision on the exact date and format of the meeting will be made by 15.06.2023 at the latest.

9. PROPOSALS FOR THE RESOLUTIONS OF THE COOMET COMMITTEE

➤ To approve Ilya Krasavin (VNIIMS, Russia) as a new Chair of SC 4.2 "COOMET Informational Resources" for 4 years (from 2023 to 2027);

➤ To approve recommendation COOMET R/TR/XX:2023 "Rules for creation, approval and update of COOMET courses on the BIPM e-learning platform. Monitoring and satisfaction assessment for participation in COOMET training courses";

➤ To approve updated recommendation COOMET R/TR/27:2023 "Procedure for preparing certificates issued based on the results of trainings within COOMET" (with the title and subject field, replacing COOMET R/IT/27:2015, prepared under COOMET project 861/BY/22).

Nadezhda Liakhova

Acting TC 4 Chair