

	COOMET Program	COOMET P8/2024
	<b>PROGRAM OF COOMET FOR ASSISTANCE CEEMS FOR 2023-2025</b>	
<i>Approved at the 36th COOMET Committee meeting (4-5 June 2024, Tashkent, Uzbekistan &amp; online)</i>		

## Section 1. Organization of comparisons

№	Name of the comparison/ COOMET project	Offer of CEEMS	Possible partners		Terms	Note
			NMI (CEEMS)	NMI (not CEEMS)		
1.	T: Pilot comparisons in the field of calibration of glass thermometers (COOMET project 885/BY/23)	KG	CJSC "NBSM" (AM) Kyrgyzstandart (KG) UzNIM (UZ) TajikStandard (TJ)	pilot – BelGIM (BY) INM-MD (MD)	2023	Specify the participation of Moldova
2.	T: Pilot comparisons of digital thermometers (COOMET project 890/KZ/23)	KG	CJSC "NBSM" (AM) Kyrgyzstandart (KG) UzNIM (UZ) TajikStandard (TJ)	pilot – KazStandard (KZ)	2023	<u>Decision TC 1.10-2022:</u> after the completion of the project 826/MD-a/21
3.	T: Additional comparisons of COOMET for thermal resistance converters	KG	CJSC "NBSM" (AM) Kyrgyzstandart (KG) UzNIM (UZ) TajikStandard (TJ)	pilot – INM-MD (MD) KazStandard (KZ)	2025	
4.	T: Pilot or additional COOMET comparisons for relative humidity hygrometers	KG	CJSC "NBSM" (AM) Kyrgyzstandart (KG) UzNIM (UZ)	pilot – East Siberian branch of FSUE "VNIIFTRI" (RU) INM-MD (MD)		<u>Decision TC 1.10-2022:</u> after the completion of the project 826/MD-a/21
5.	M: Additional comparisons in the field of mass measurement in the range from 1 mg to 5 kg  <i>Object: Transported weight standards – weights with nominal values of 1 mg, 10 mg, 100 mg, 1 g, 10 g, 100 g, 1 kg, 5 kg</i>	AM	CJSC "NBSM" (AM) Kyrgyzstandart (KG) UzNIM (UZ) TajikStandard (TJ)	Pilot – VNIIM (RU) INM-MD (MD)	2023-2024	<u>Decision TC 1.6-2022:</u> The project was proposed and agreed (892/RU-a/23)

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6.	<b>M:</b> Comparisons within the framework of COOMET or bilateral comparisons  <i>Object:</i> _____	KG, TJ	Pilot - Kyrgyzstandart (KG) CJSC "NBSM" (AM) TajikStandard (TJ) UzNIM (UZ)	VNIIM (RU) INM-MD (MD)	2023-2024	<u>Decision TC 1.6-2022:</u> 1. Take note of the information on the interest of countries in organizing this type of work within the framework of COOMET. 2. Ask Ekaterina Kotova (Kyrgyzstandart, Kyrgyz Republic) to prepare a project form. The approximate deadline for completing the form is the end of October 2023
7.	<b>M:</b> Key comparisons of national gas pressure standards in the ranges from ___ to ___)	KG	CJSC "NBSM" (AM) Kyrgyzstandart (KG) - up to 7 MPa, UzNIM (UZ)	Pilot – VNIIM (RU) KazStandard (KZ)	2023-2024	<u>Decision TC 1.6-2022:</u> Ask VNIIM, Russia, to clarify the characteristics of the objects of comparisons with interested participants in a working manner, after which to issue the form of the proposed topic of COOMET in the prescribed manner.
8.	<b>M:</b> Key comparisons of national hydraulic pressure standards in the ranges from ___ to ___  Object: pressure gauge with digital indication (nominal values: 0; 0,7; 1,4; 2,1; 2,8; 3,5; 4,2; 4,9; 5,6; 6,3 and 7.0 MPa), working medium: nitrogen or air	UZ	Kyrgyzstandart (KG) Up to 70 MPa – in working order (UzNIM)	Pilot- VNIIM (RU) Up to 70 MPa – in working order (VNIIFTRI, RU) KazStandard (KZ)	2023-2024	<u>Decision TC 1.6-2022:</u> Ask VNIIM, Russia, to clarify the characteristics of the objects of comparisons with interested participants in a working manner, after which to issue the form of the proposed topic of COOMET in the prescribed manner.
9.	<b>M:</b> Comparison of measuring dishes (flasks, pipettes) by gravimetric method  <i>Object: glass measuring utensils (100 ml flask, 10 ml pipette)</i>	KG	Pilot- Kyrgyzstandart (KG) CJSC "NBSM" (AM) UzNIM (UZ) TajikStandard (TJ)	VNIIM (RU) INM-MD (MD)	2024	<u>Decision TC 1.6-2023:</u> 1. Take note of the information on the interest of countries in organizing this type of work within the framework of the COOMET. 2. Ask Zhyldyz Karymshakova (Kyrgyzstandart, Kyrgyzstan) to prepare a project form. The approximate deadline for

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						completing the form is the end of November 2023.
10.	<b>M:</b> Additional comparisons in the field of calibration of compression force sensors  <i>Object: power measuring machines (power measuring machines of the 1st category; measuring range: 100 kN, 500 kN, 1000 kN)</i>	UZ	Kyrgyzstandart (KG) TajikStandard (TJ) UzNIM (UZ)	Pilot- VNIIM (RU)	2023-2024	<u>Decision TC 1.6-2023:</u> 1.To take into account information on the interest of countries in organizing this type of work within the framework of COOMET; 2. Ask VNIIM to prepare a topic form (specify in the form the additional equipment of the laboratory with a reference standard).
11.	<b>M:</b> Pilot comparisons of kinematic viscosity units of a liquid (COOMET project 788/KZ-a/19)		UzNIM (UZ)	KazStandard (KZ)	2023-2024	At the moment, a technical protocol is being prepared. The approximate deadline for completing the form is the end of 2023. Measurements were carried out
12.	<b>M:</b> Conducting pilot comparisons of liquid density (COOMET Project 789/KZ-a/19)		UzNIM (UZ)	KazStandard (KZ)	2023-2024	At the moment, a technical protocol is being prepared. The approximate deadline for completing the form is the end of 2023. Measurements were carried out
13.	<b>M:</b> Additional comparison in the field of liquid density measurements  <i>Object: distilled water at 5 °C; 20 °C; 40 °C; 60 °C; tridecane C13H28 with a density of 756,356 kg/m3 at 20 °C</i>	UZ	NMI of COOMET member countries UzNIM (UZ)	Pilot- VNIIM (RU) or NMI of COOMET member countries INM-MD (MD)	2023 - 2024	<u>Decision TC 1.6-2023:</u> 1.To take into account information on the interest of countries in organizing this type of work within the framework of COOMET; 2. Identify the pilot in a working order and specify the ranges. The approximate date is the end of 2023.
14.	<b>M:</b> Additional comparison in the field of measurements of the kinematic viscosity of a liquid  <i>Object: Standard samples of kinematic viscosity of liquid from 0.3</i>	UZ	NMI of COOMET member countries UzNIM (UZ)	Pilot- VNIIM (RU) or NMI of COOMET member countries	2023 - 2024	<u>Decision TC 1.6-2023:</u> 1. Take note of the information on the interest of countries in organizing this type of work within the framework of the

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	<i>to 100000 m2/s2</i>					COOMET. 2. Ask VNIM to prepare a topic form. The approximate deadline for completing the form is the end of October 2023; 3. To discuss China's participation in this comparison in a working manner
15.	<b>EM:</b> Measures and stores of electrical resistance (by air method)	UZ	Kyrgyzstandart (KG) TajikStandard (TJ)		2024	<u>Decision TC 1.3-2023:</u> 7 a) Note the absence of interested TC members from countries that consider themselves to CEEMS (UzNIM, Uzbekistan; Kyrgyzstandart, Kyrgyzstan; NOSM CJSC, Armenia), standards and a transported standard for conducting comparisons according to paragraphs 15, paragraph 16 of the COOMET Program for CEEMS Assistance for 2023-2025
16.	<b>EM:</b> Calibrator of alternating and direct current and voltage	UZ	Kyrgyzstandart (KG) TajikStandard (TJ) UzNIM (UZ)		2024	
17.	<b>EM:</b> "Additional comparison of measuring systems of high current transformers" (COOMET project 859/TR/22)  <i>Object: inductive multi-band current transformer with nominal current conversion coefficients of 5 A ... 1000 A / 5 A</i>  <b>EM:</b> Additional comparison in the field of calibration of current transformers of accuracy class: 0.05; measurement interval: from 0.5 to 1000 A	UZ	UzNIM (UZ)	Pilot – TUBITAK UME (TR) KazStandard (KZ)	2022-2024	<u>Decision TC 1.3-2023:</u> 7 d) Consider it appropriate to combine paragraphs 17 and 18 of the COOMET Program for CEEMS Assistance for 2023-2025 in view of the identical objects of comparison (comparison of measuring systems of high-current transformers) and interested participants (UzNIM, Uzbekistan).
18.	<b>EM:</b> COOMET project 802/UZ-a/20 "Pilot comparisons in the field of voltage and DC and AC power measurements, electrical resistance" <i>Object: 6.5-digit digital multimeter:</i>	UZ	Pilot - UzNIM (UZ)	AzMI (AZ) GEOSTM (GE) KazStandard (KZ) INM-MD (MD)	2020-2024	<u>Decision TC 1.3-2023:</u> 7 c) Consider the possibility of interested TC members from countries that consider themselves CEEMS (UzNIM,

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	<i>DC voltage 30 V at the limit (0 ÷ 1000) V;  AC voltage 30 V at a frequency of 1 kHz at the limit (0 ÷ 750) V;  DC 10 mA at the limit (0 ÷ 1) A;  AC 10 mA at a frequency of 1 kHz at the limit (0 ÷ 1) A;  electrical resistance 1 Ω at the limit (0 ÷ 1) GΩ</i>			NSC "IM" (UA)		Uzbekistan; Kyrgyzstandart, Kyrgyzstan; NOSM CJSC, Armenia), after acquiring the appropriate standards, to participate in the comparisons of COOMET 802/UZ-a/20 "Pilot comparisons in the field of voltage and AC voltage measurements current, electrical resistance", coordinator – UzNIM, D.T. Arifkhanov.
19.	<b>EM:</b> Additional comparison in the field of calibration of multimeters of accuracy class: 0.0003% of the measurement interval: from 0 to 1000 V (nominal values: 100 mV, 10 V, 100 V, 1000 V)	UZ	UzNIM (UZ)		2024 - 2025	<u>Decision TC 1.3-2022:</u> 7 b) Note that interested TC members from countries that consider themselves CEEMS (UzNIM, Uzbekistan) do not have a transportable standard for conducting comparisons according to clause 20 of the COOMET CEEMS Assistance Program for 2023-2025
20.	<b>RI:</b> Two-way comparisons on the measurement of kerma in the air and the associated values of gamma radiation caesium-137 and/ or X-ray radiation	AM	CJSC "NBSM" (AM) ? TajikStandard (TJ)	VNIIM (RU)	2023-2025	<u>Decision of TC 1.9-2023:</u> Conduct two-way comparisons with VNIIM at the request of the interested NMI
21.	<b>AUV:</b> Additional comparison in the field of microphone calibration  <i>Object: Microphone-WS2P working standard (characteristic in the pressure field: ±1 dB in the range from 5 Hz to 7 kHz; ±2 dB in the range from 3.15 Hz to 20 kHz)</i>	UZ	UzNIM (UZ)	Pilot - TUBITAK UME (TR)	2023-2024	<u>Decision of TC 1.3-2023:</u> To include additional two-way comparisons in the field of microphone calibration to the Program of COOMET comparisons in order to confirm calibration capabilities (services) during microphone calibration (participants: UzNIM, TUBITAK UME).  To request UzNIM to send to the COOMET Secretariat a form of the proposed COOMET project for registration in the prescribed

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						manner.
22.	L: Caliper	KG	CJSC "NBSM" (AM) TajikStandard (TJ) UzNIM (UZ)		2023-2024	The issue will be discussed at the TC 1.5 meeting (February 2024).
23.	L: End length measures L: Additional comparison in the field of end measures  <i>Object: plane-parallel end measures of length from 1 to 100 mm</i>	KG UZ	CJSC "NBSM" (AM) Kyrgyzstandart (KG) TajikStandard (TJ) UzNIM (UZ)		2023-2024	
24.	TF: Comparisons of electronic stopwatches	KG	Kyrgyzstandart (KG) UzNIM (UZ)			<u>Decision of TC 1.11-2023:</u> To assist the laboratory of Kyrgyzstan in the organization of calibrations of electronic stopwatches <b>To clarify the status of the comparison: pilot or additional</b> <b>KG - Any option (with accreditation) will be acceptable for the Kyrgyz Republic.</b>
25.	TF: Two-way comparisons of time scales UTC (UME) of Turkey and UTC (UzNIM) of Uzbekistan (COOMET project 883/UZ-a/23)	UZ	UzNIM (UZ)	Pilot – TUBITAK UME (TR)	2023-2024	
26.	M: Additional comparisons in the field of mass and volumetric water flow	UZ	UzNIM (UZ)	VNIIM (RU)	2024	Included based on the Proposals of the NMI (not CEEMS), based on the results of the survey

\* Customs costs and logistics will depend directly on the geographical location of the participating countries.

## Section 2. Internships under the authority of COOMET

No	Subject of training/internship	CEEMS interest	Number of specialists	NMI Offer CEEMS by format	Offer by NMI (not CEEMS)	Term/ number of hours	
1.	Calibration of pressure measuring instruments	AM TJ UZ	2	Offline, online		2023/ 72 h  1-2 quarters 2024/ 80 h	
2.	Calibration of mass measuring instruments	AM TJ	2	Offline, online		2023	
3.	Calibration of measuring instruments of geometric quantities (measuring goniometers, roughness devices, radius and threaded templates)	UZ TJ	2-3	Offline, online	<b>VNIIMS (RU):</b> Calibration of instruments for measuring surface roughness parameters and reference roughness measures. Training on the basis of FSBI "VNIIMS"	1-2 quarters 2024/ 80 h	
4.	Calibration of illumination devices (including optical measurements)	TJ UZ	3	Offline, online		1-2 quarters 2024/ 80 h	
5.	Calibration of electrical measuring devices (specify)	AM TJ UZ		COOMET member countries with CMCs in the KCDB database (offline)	<b>VNIIFTRI (RU):</b> Calibration of devices for measuring electric and magnetic fields	1-2 quarters 2024/ 80 h	
6.	Calibration of measuring instruments by thermometry (including training on SI comparison in thermometry)	TJ UZ AM		COOMET member countries with CMCs in the KCDB database (offline)		1-2 quarters 2024/ 80 h 2024	
7.	Training on comparisons of SI ionizing radiation		3	Offline, online	<b>VNIIFTRI (RU):</b> In the field of ionizing radiation measurements (measuring instruments of absorbed dose, absorbed dose rate of photonic, electron, proton and neutron radiation; dose equivalent and dose equivalent power of photonic, electron and neutron radiation; volumetric activity of radioactive aerosols, vaporous iodine-131, radon, thoron; radon flux density; volumetric activity of beta-active gases). <b>VNIIM (RU):</b> The internship of specialists is carried		Co-financing

No	Subject of training/internship	CEEMS interest	Number of specialists	NMI Offer CEEMS by format	Offer by NMI (not CEEMS)	Term/ number of hours	
					out on a contractual basis. internships in the field of dosimetry, radioactivity measurement and neutron measurements.		
8.	Verification of devices for photo and video recording of speed violations	KG	2	Russia, Offline		2022/ 48 h The Kyrgyz Republic offers to conduct online	Co-financing