

The background of the cover is a high-quality photograph of water splashing, with numerous droplets and ripples in shades of blue. The text is overlaid on this image. A dark blue horizontal bar is positioned behind the 'SIC ICWC' text.

ANNUAL REPORT

SIC ICWC

20

24

The Scientific-Information Center (SIC) serves as the executive body of the Interstate Commission for Water Coordination (ICWC) in Central Asia. Following decisions by the Heads of State of Central Asia on March 26, 1993 and April 9, 1999, the ICWC and its executive bodies, including the SIC, were integrated into the International Fund for Saving the Aral Sea (IFAS) and granted the status of international organizations.

TABLE OF CONTENTS

- SUMMARY.....4
- ICWC MEETINGS.....6
- ANALYTICS AND ASSESSMENTS7
- CAWATER-INFO - THE CENTRAL ASIAN WATER AND ENVIRONMENTAL KNOWLEDGE PORTAL8
 - CAWater-IS Regional Information System on Water and Land Resources in the Aral Sea Basin and Databases8
 - ICWC, SIC and TC websites8
 - Knowledge bases.....8
 - Section “Projects”.....9
 - Telegram-channel.....9
- SCIENTIFIC COOPERATION AND RESEARCH10
 - Transboundary water cooperation, law and diplomacy.....10
 - Adaptation of water and land use to changing conditions.....11
 - Environmental issues11
 - Water, energy, land and ecosystem nexus.....12
 - Flow planning and regulation based on advanced data and tools.....12
 - Financing water13
 - Water, heritage and culture.....13
 - Gender in water.....13
- CAPACITY BUILDING17
- EVENTS19
- COOPERATION WITHIN IFAS.....19
- INTERNATIONAL COOPERATION.....20
 - Cooperation within the UN.....20
 - World Water Council21
 - International Network of Basin Organizations.....21
 - Organization for Economic Cooperation and Development.....21
 - German Agency for International Cooperation22
 - International Water Management Institute.....22
 - International Water Resources Association.....22
 - Multilateral development banks.....22
 - Development of new partnerships.....22
- Mass media23
- CONCLUSION: 2024 YEAR-IN-REVIEW AND PLANS FOR 202524

SUMMARY

In 2024, two meetings of the Interstate Commission for Water Coordination (ICWC) in Central Asia (CA) were successfully convened. The anniversaries of the prominent figures in the Central Asian water sector – Prof. Viktor Dukhovniy (posthumously), Mr. Nariman Kipshakbaev, and Mr. Rim Giniyatullin, were commemorated during the Scientific-Practical Conference 'Water in Central Asia: the Future in Cooperation' in Tashkent on [November 8th](#).

SIC **continued monitoring** the water-management situation in the Amu Darya and Syr Darya River Basins, the status of the South Aral Region and the Aral Sea and other water bodies. In partnership with BWO Amu Darya, control measurements have been successfully accomplished at key gauging stations and canals in the Amu Darya middle reaches. Jointly with BWO Syr Darya, SIC conducts research to determine more accurately water balance components of the Syr Darya River and its key tributaries over 2019-2023 .

An expedition was undertaken to study the status of the Aidar-Arnasay Lake System.

SIC has **published** 37 pieces of work, including a Collection of Memories about V.A. Dukhovniy "...I served both people and water...", conference proceedings, the Water Yearbook: Central Asia and around the Globe, research papers, and policy briefs. A weekly news digest is distributed to 80 subscribers.

This year marks two decades of **CAWater-Info, the Central Asian Water and Environmental Knowledge Portal**. In 2024, the portal saw significant growth, with 1650 information units (totaling more than 6 GB) added to its collection. Additionally, the ICWC website and several knowledge bases now have a modern adaptive design. The portal's consistent audience and high visibility in search results (garnering 1.23-1.69 million Google search hits) highlight its potential, which will be further developed in 2025. Furthermore, the **CAWater-IS Regional Information System** has embarked on a modernization process, with updates planned for its new website (www.cawater-is.net).

New modeling partnerships established: SIC ICWC, in collaboration with the OECD, is developing an Em-NEXUS economic model (IKI). Additionally, partnerships have been formed with the World Bank and SEI on the WEAP/LEAP model, and with the University of Manchester on the PyWR model.

Expert support and analytical activities have expanded, including increased production of analytical materials on key topics of the Central Asian water agenda. Notably, analytical research was initiated to inform the Amu Darya and Syr Darya Basin Dialogues (commissioned by the GIZ Green Central Asia Programme), focusing on aquatic ecosystems and climate-resilient infrastructure. The Expert Platform on Water Security, Sustainable Development, and Future Studies has seen resurgence in activity.

Capacity building efforts included five training workshops, publication of a Teaching Guide for Trainers on 'Integration of Adaptation into Water Planning in Turkmenistan,' and lectures at universities across Central Asia and the School of Water Workers at the Uzbek Ministry of Water Management. A student from the AgroParisTech, Paris-Saclay University in France underwent an internship at SIC ICWC.

Events: SIC was engaged in 60 international events, including the workshop on transboundary water allocation in Zambia (April 15-16), 10th World Water Forum in Bali (May 18-24), 3rd Conference on International Decade for Action, 2018-2028 in Dushanbe ([June 10-13](#)), Global Forum Ecumene (September 16-18), INBO World General Assembly in Bordeaux ([October 7-9](#)), 10th session of the Meeting of the Parties to the Water Convention in Ljubljana

(October 23-24), COP 29 ([November 11-22](#)). SIC ICWC also took part in preparation to the [One Water Summit](#) in Riyadh.

Gender agenda: SIC joined the 'Women in Water Resources Management in Central Asia and Afghanistan' Network and contributed to the development of the draft Gender Concept for the Water Sector of the Republic of Uzbekistan until 2030.

SIC maintained its active involvement in the **Board of Governance of the World Water Council**, the [Implementation Committee](#) under the Water Convention and is a member of the International Scientific Committee of IWRA's XIX World Water Congress (December 1-5, 2025, Marrakesh) and the Organizing Committee of the III International Conference "Lakes of Eurasia: challenges and solutions" (May 20-23 2025, Kazan).

Existing partnerships with the OECD and UNECE were continued within the framework of the project 'Regional mechanisms for the low-carbon, climate-resilient transformation of the energy-water-land nexus in Central Asia.'¹ **New partnerships** were also forged with the WB, ADB, University of Manchester, UNEP, FAO, Korea Rural Communities Corporation (KRC), Japan's ROTOBO Association, and the Russian Academy of Foreign Trade of the Ministry of Economic Development of the Russian Federation.

SIC' team was enriched by **three young professionals** in the field of hydrology, law and economy.

For SIC ICWC, **2024 has been a year of strengthened partnerships and emerging opportunities for growth and collaboration.** We anticipate a new phase of activity embraced by both challenges and exciting prospects for advancing sustainable water management and enhancing water security in the Central Asian region.

¹ Hereafter 'Regional mechanisms for transformation'/IKI

ICWC MEETINGS

In 2024, jointly with other executive bodies, SIC facilitated two ICWC meetings:

[86th meeting](#) was held in Shymkent on April 12.

SIC presented the information on the 3rd Agenda item “Progress on implementation of the tasks arising from the initiatives of the Heads of IFAS Founder States.” Finally, the following decision was made on this item: “1. Acknowledge the work done by water management organizations and executive bodies of ICWC on implementation of proposals and initiatives put forward by the Heads of IFAS Founder States at their Summits in Turkmenbashi (2018) and Dushanbe (2023); 2. ICWC executive bodies shall report updates on implementation of the tasks set at the IFAS summits at subsequent meetings; 3. Recognize the importance of strengthening training activities at regional and national levels and assign SIC ICWC to work with international partners to get timely information on future regional trainings and post the training materials on the ICWC website.”

[87th meeting](#) was held in Ashgabat on November 6.

SIC reported on (1) progress on the tasks set at the summits of the Heads of IFAS Founder States”; (2) the work of the organizing committee established for the celebration of the 90th anniversary of the honorary members of the ICWC, V. A. Dukhovniy (posthumously) and N. K. Kyshakbaev, 80th anniversary of honorary member of the ICWC R. A. Giniatullin. The ICWC members decided to: “1. Acknowledge the work done by ICWC executive bodies in implementing the proposals and initiatives put forward by the Heads of IFAS Founder States at the Summits in Turkmenbashi (2018) and Dushanbe (2023); 2. ICWC members and executive bodies shall submit the updated information on fulfillment of the tasks set at the IFAS summits by the next meetings, with special emphasis put on strengthening regional cooperation mechanisms.”



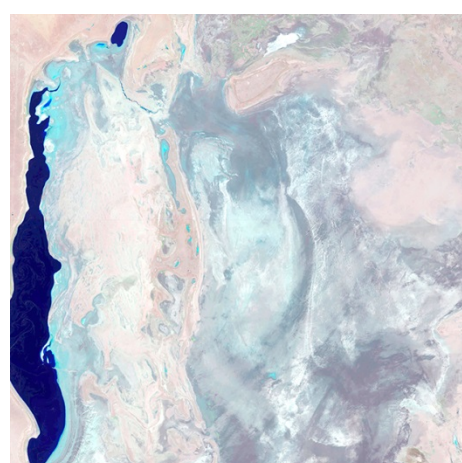
ANALYTICS AND ASSESSMENTS

In partnership with BWO Amu Darya and BWO Syr Darya, SIC keeps monitoring of water releases from large reservoir hydroschemes of transboundary importance and of water distribution, draws water balances of reservoirs and rivers, including by reaches of the Amu Darya and Syr Darya rivers, compares actual and planned figures to identify any deviations.² Every ten days, SIC publishes analyses on situation in the river basins on ICWC website, sections “[Water management situation in the Amu Darya River Basin](#)” and “[Water management situation in the Syr Darya River Basin](#)”.

Water availability in river basins is assessed for growing and non-growing seasons. The analytical reports on water-management situation in the Amu Darya and Syr Darya river basins were prepared for the non-growing season (2023-2024) and growing season (2024) and included an assessment of water allocation and operation regimes of reservoir hydroschemes, assessment of water losses; key figures of these analytical reports were streamlined with the data presented by BWO Amu Darya and BWO Syr Darya (river water content, operation regimes of hydroschemes, water withdrawals).³

Using [satellite images](#), SIC estimates inflow from the Amu Darya and collecting drains to the Aral Sea, the water surface, wetland and dried areas within the Large and North Aral seas and lakes of the Aral Sea region.

The Center renders information and expert assistance to national and regional organizations on the matters related to transboundary cooperation, water security, policy and law, sound water use, climate adaptation, the Qosh Tepa Canal in Northern Afghanistan, water use forecasting, status of water bodies, PPPs in the water sector.



² http://www.icwc-aral.uz/reports_amudarya.htm, http://www.icwc-aral.uz/reports_syrdarya.htm

³ http://www.cawater-info.net/analysis/index_e.htm

CAWATER-INFO – THE CENTRAL ASIAN WATER AND ENVIRONMENTAL KNOWLEDGE PORTAL

The Center provides information support to the ICWC and its executive bodies through the [CAWater-Info](#),⁴ the **Central Asian Water and Environmental Knowledge Portal**, which marked **two decades** in 2024.

As of December 2024, the Portal contains **82.35 GB** of information. The Portal garners 1.23-1.69 million Google search hits, with 17 600-28 100 clicks every month.

Modernization⁵ of the Portal, which was started in 2023, continued in 2024. This included adding more functionalities, adaptive design, new tools and nexus approaches. The design of the Portal has been re-developed. The Regional Information System (RIS), all databases, some sections, including Analytics and Tools (models) will have a new domain of www.cawater-is.net.

CAWater-IS Regional Information System on Water and Land Resources in the Aral Sea Basin and Databases

The RIS was further modernized in 2024. In particular, new blocks and web-pages Demography and Glossary were developed and populated and the information on water withdrawals from the Amu Darya and the Syr Darya for 2024 was added.

The Portal's database saw new information on: (1) water withdrawal (limits/quotas and actual) from the Amu Darya and the Syr Darya (by BWOs' structures) for 2024; (2) actual water withdrawal from the Chirchik and Karadarya rivers for 2023-2024; (3) inflow to the Aral Sea and the Amu Darya Delta for the non-growing season 2023-2024 and the growing season 2024; (4) analysis of water-management situation in the Amu Darya and Syr Darya basins for the non-growing season 2023-2024 and the growing season 2024; (5) results of RS-based monitoring of the Aral Sea water surface and littoral area; (6) land use, economic indicators, and reservoir operation in 2023.

ICWC, SIC and TC websites

The [ICWC website](#) containing the information on history and activity of the ICWC, its meetings and executive bodies, as well as event reports, received a modern adaptive design refresh. The ICWC Training Center website has been updated and the [SIC ICWC web-site](#) is in the process of re-designing.

Knowledge bases

A key focus of the SIC's information activities is the development of its [Knowledge Base](#). In 2024, 1,651 information units were added to the Portal, including monographs, dissertations, abstracts, scientific articles, regulatory-methodological and reference materials (recommendations, guidelines, etc.), patents, and maps. The Knowledge Base also saw improvements to the "International and National Water Law," "Land Law," and "Land Reclamation and Irrigated Agriculture" sections, along with the addition of a new "Energy" section (16) to its rubricator.

⁴ the [CAWater-Info](#) portal includes the following key components: Database and Regional Information System (RIS) on water and land in the Aral Sea Basin (CAWater-IS); Analytics; Tools (models); Knowledge base; "Water World" and websites of [ICWC](#), [SIC ICWC](#), [EECCA Network of Water Management Organizations](#); and, various project websites.

⁵ as part of the 'Regional mechanisms for transformation'/IKI

Section "Projects"

In 2024, a website for the Regional Mechanisms of Transformation/IKI project was launched.

The project's Nexus Projects Database, encompassing ongoing and past nexus-related **80** projects and **7** programs in Central Asian (CA) countries has been converted to an online format. This database provides information categorized by: country, thematic area, budget and funding source, executor, implementation period, brief description (goals, objectives, results), beneficiaries, contact information (if available), and links to official web pages/sources. Currently, the database resides on the SIC ICWC internal server and will be publicly accessible upon completion of the CAWater-Info Portal's modernization.

Telegram-channel

Additionally, a Water-Energy-Food-Ecosystems News Digest Telegram channel is maintained.

SCIENTIFIC COOPERATION AND RESEARCH

The SIC staff conducted research and developed practical tools to support decision-making.

In 2024, **four** projects with the Agency for Innovative Development of Uzbekistan, OECD/IKI, IHE Delft Institute for Water Education, and UNDP-Turkmenistan (completed in 2024) continued.

Additionally, **seven** new research projects were initiated, with **five** completed in 2024 (in collaboration with OECD/Uzbekistan, BWO Amu Darya, the All-Russian Academy of Foreign Trade, the University of Tokyo, and We-Act) and **two** projects extending into 2025 (with GIZ and the World Bank under the CAWEP program).

Furthermore, the SWOT Scientific Committee approved an application submitted by SIC in partnership with the European Commission's Scientific Committee and the French Space Agency. A joint project proposal with partners, submitted to the German Federal Ministry of Education and Research (BMBF), is currently under review.

Resulting from the research efforts, SIC staff published **16** articles, including: one in the GEP journal, one in E3S Web of Conferences, one in Agricultural Systems journal, two in INBO newsletter, four in Uzbekistani publications, and seven in Russian Federation publications.

Research focused on the following key areas:

Transboundary water cooperation, law and diplomacy

Support was provided for the development of proposals and materials related to **strategic cooperation between the region's countries**, the Regional Strategy for Rational Use of Water Resources, and regional water and energy security. Consultations and working group discussions were conducted, including the preparation of analytical materials for interstate meetings and initiatives. The achievements and challenges of transboundary water management in Central Asia, as well as the need to strengthen existing agreements, institutions, and cooperation mechanisms, were presented at various events. These included the workshop 'Data Sharing as a Basis for Building Trust' (January 17-18, Delft), the regional seminar on water diplomacy⁶ (April 9, Ashgabat), the workshop 'The Phenomenon of Convergence in International Law' (June 25, online), and the international round table 'Development of Water Law in Central Asia'⁷ (November 19, online), among others (see sections 'Capacity Building', 'Events', 'International Cooperation').

Expert discussions on water **cooperation between CA countries and Afghanistan**, particularly concerning the Qosh Tepa canal, were advanced through presentations of analytical materials at: (1) the international conferences 'Current Trends in Afghanistan: Implications for Central Asia' (February 20, Tashkent) and 'Afghanistan under Taliban Rule – Reaction of Neighboring Countries and Great Powers' (August 27, UWED, Tashkent); and (2) the round table 'Central Asia and Afghanistan. Visions of a Common Future' (September 11-12, Termez). An analytical study, 'Water relations between Afghanistan and Uzbekistan: establishing dialogue,' was also prepared.⁸

Collaboration with the **Academy of Water Law at Wuhan University** (PRC) is being developed. SIC ICWC representatives participated in the online workshop 'The Phenomenon of

⁶ organized by UNDP/GEF Project "Conservation and Sustainable Management of Land Resources and High Nature Value Ecosystems in the Aral Sea Basin for Multiple Benefits"

⁷ organized by the Diplomacy Academy at UWED of Uzbekistan and the Diplomacy Academy at MFA of the Kyrgyz Republic

⁸ upon agreement with the Tokyo University

Convergence in International Law’ (June 25) and the international conference ‘Rethinking the Concept of “Community” in International Water Law’ (June 26), co-organized with the University of Edinburgh's Law Faculty.

The ‘**Cross-regional learning for transformative water diplomacy (CroWD)**’ project, under contract with IHE Delft Institute for Water Education, is ongoing. This project aims to enhance understanding of water diplomacy and develop transformative approaches for more equitable and sustainable outcomes.

Adaptation of water and land use to changing conditions

Research continued at pilot sites in Muynak and Ellikkala districts of Karakalpakstan, focusing on the adaptation of modern water and land monitoring systems, the modeling water balance (crop water requirements) to address salinization and improve land productivity in the Aral Sea region.⁹ Specifically, a soil salinity map for Ellikkala district was developed, and a research version of the REQWAT model for calculating crop water requirements is tested.

Additionally, an analysis of methods for assessing crop water requirements under climate change, including WEAP model capabilities, was conducted.¹⁰

Environmental issues

SIC staff conducted an expedition to study the Aidar-Arnasay Lake System from April 29th to May 4th. The findings of this expedition were distributed to relevant agencies in Uzbekistan and subsequently published in the journal ‘Economy and Socium’, Issue 9 (124), 2024.



Research was conducted on ‘Environmental flow in legislation and practices in Uzbekistan and measures for improvement’, ‘Current hydrological and hydrochemical regime of the Amu Darya River’, and ‘Natural conditions of Sudochie-Akpetki sanctuary’.

Jointly with national experts of CA countries, a ‘Joint work to preserve ecosystems of the Amu Darya River Basin, including zones of flow formation and dispersion’¹¹ was initiated. Based on the results of the study, an expert assessment of the current state of key water-dependent

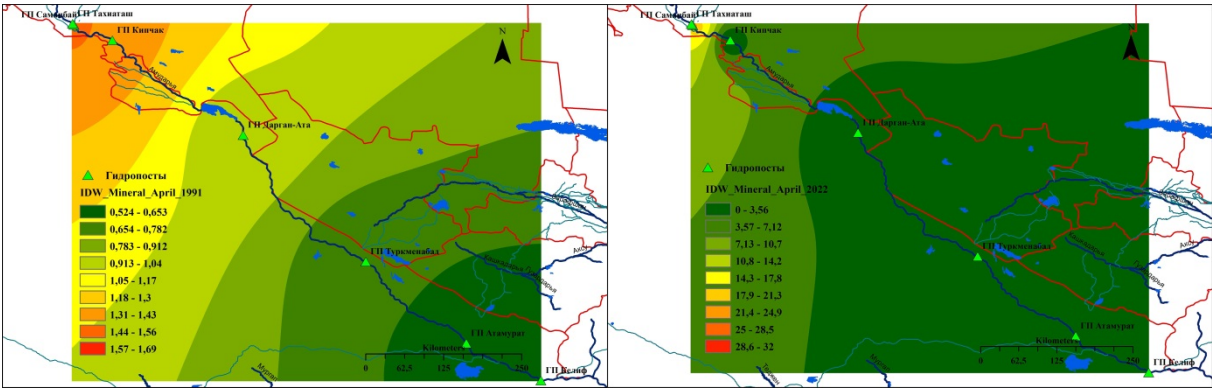
⁹ as part of a project with the Agency for Innovative Development of Uzbekistan under the Japanese SATREPA Program

¹⁰ as part of the ‘Regional mechanisms for transformation’/IKI

¹¹ as part of the GIZ Programme “Climate-sensitive water resources management in Central Asia”

ecosystems in the Amu Darya river basin will be made and measures for their sustainable functioning and conservation will be proposed.

GIS maps for visualization of water salinity dynamics along the Amu Darya River were generated for 1991-2022.



Water, energy, land and ecosystem nexus

SIC, in partnership with the OECD and UNECE and with the participation of experts from Central Asian countries, is implementing the project “Regional Mechanisms for the Low-Carbon, Climate-Resilient Transformation of the Energy-Water-Land Nexus in Central Asia” (IKI).

As part of this project, SIC has initiated the modernization of the [CAWater-Info](#) Portal, the development of recommendations for financial mechanisms to support water-energy cooperation in Central Asia, and the creation of a modeling framework for quantitative assessment of economic benefits of regional cooperation on the energy-water-land nexus. Additionally, the project focuses on developing practical tools for effective nature management, including hydromodule zoning, crop water requirement calculations, and the assessment of territorial water security in the Aral Sea Basin. Furthermore, SIC is working on a proposal for the establishment of a Regional Center of Excellence, based on the SIC Training Center and the Expert Platform on Water Security, Sustainable Development, and Future Studies.

A side-event “Finance and Investment for Water, Energy and Land-use Nexus in Central Asia”¹² (Dushanbe, [June 11](#)) and a scientific-practical conference "Water in Central Asia: The Future in Cooperation" (Tashkent, [November 8](#)) were held jointly with OECD and UNECE. SIC took part in the 3rd meeting of the Regional Working Group on the Mutually Beneficial Water-Energy Mechanism as part of the Green Central Asia Initiative organized by GIZ and OECD (Tashkent, [December 10](#)).

Flow planning and regulation based on advanced data and tools

In partnership with BWO Amu Darya, control measurements have been successfully accomplished at key gauging stations and canals in the Amu Darya middle reaches. As a result, BWO Amu Darya was provided with a methodology for calculation of water balance’s elements within the Kelif g/s – Darganata g/s reach. SIC assisted in drafting recommendations for effective distribution of water resources in the Naryn and Kara Darya river basins¹³, taking into account climate change, under contract with CAIAG.

¹² As part of the Third High-Level International Conference on the International Decade for Action “Water for Sustainable Development”, 2018-2028 in Dushanbe, June10-13, 2024

¹³as part of the EU’s We-ACT project

Additionally, SIC made forecasts of water availability in the Zaravshan, Vakhsh and Naryn rivers for the growing season using the MODSNOW program, explored modeling of the Syr Darya and Amu Darya river basins with WEAP and PyWR models¹⁴, and analyzed innovative devices for automated water accounting in irrigation and drainage systems of the Republic of Uzbekistan.

SIC also collaborated with the University of Manchester on the Python Water Resources (Pywr) Planning Model. This collaboration included training SIC staff in PyWR modeling¹⁵, culminating in certification for its application in the Chirchik River Basin (Tashkent, [November 11-13](#)). Furthermore, SIC signed a contract with the World Bank to model the water-energy nexus using adjusted WEAP and LEAP models.

Financing water

SIC, in collaboration with regional countries, is actively engaged¹⁶ in discussions to enhance institutional and financial mechanisms for water-energy cooperation in Central Asia. This includes exploring the introduction of new elements and coordination mechanisms to improve service delivery.

Furthermore, SIC contributed to the OECD's "National Dialogue on Water in Uzbekistan" project by assessing the investment climate for water sector development in Uzbekistan. SIC also presented potential strategies for strengthening financial mechanisms for water and energy cooperation in Central Asia at the 3rd meeting of the Regional Working Group on Mutually Beneficial Water and Energy Mechanism, held in Tashkent on December 10 under the Green Central Asia Initiative, organized by GIZ and OECD.

Water, heritage and culture

Research on water heritage of Central Asia continued. The video-record titled "Water Governance in Central Asia: Lessons from the Past" on the value of past water management systems for present and future generations was presented at the scientific symposium of the ICOMOS International Scientific Committee on Water and Heritage "Water and Heritage: Bridging Divides and Connecting Past, Present and Future" in Pune, India (August 7-10). At the meeting of the Expert Platform on Water Security, Sustainable Development, and Future Studies, it was proposed to develop the thematic area "Water and Heritage in Central Asia" as the main research theme for 2025 (Tashkent, [November 9](#)).

Gender in water

SIC contributed to the development of the draft Gender Concept for Water Management in Uzbekistan through 2030.

SIC, as a member of the "Women in Water Resources Management in Central Asia and Afghanistan" Network, reported at: (1) 2nd Global Forum of the Women in Water Diplomacy Network (Vienna, [March 4-7](#)); (2) a workshop "Introduction to the Water-Energy-Food-Ecosystems (WEFE) Nexus: A Comprehensive Overview and Opportunities in the Central Asian Region" (online, May 17); (3) the Youth Seminar "Drops of the Future" (Almaty, [September 4-7](#)); (4) a seminar "Climate Change Agenda and Gender Dimensions" (online, December 10); (5) Women in Water Diplomacy Network 2024 'Year-in-Review' Online Event ([December 17](#)).

¹⁴ as part of the 'Regional mechanisms for transformation'/IKI

¹⁵ organized by SIC, IWMI, Nexus Analytics, and the University of Manchester as part of the [NEXUS Gains](#) project

¹⁶ as part of the 'Regional mechanisms for transformation'/IKI

SIC participated in the seminar of the GIZ project “Regional Approaches to Development Policy on Gender Equality in Central Asia” (online, August 29); the thematic session “Blue Ocean: New Opportunities for Women” of the Fourth Eurasian Women's Forum (St. Petersburg, [September 19](#)); in the work of the expert group on developing a roadmap for “Advancing the women, peace and security agenda in Central Asia” (Almaty, [September 23-24](#)).



PUBLICATIONS

SIC produces and distributes a range of publications, including ICWC bulletins, press releases, legal and thematic collections, collections of scientific papers, and scientific and analytical notes.

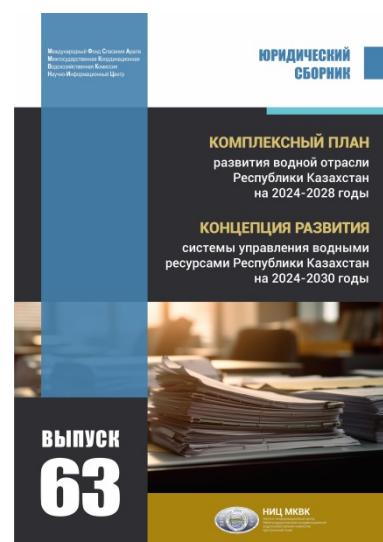
In 2024, SIC published **37** pieces of work and **52** newsletters.



Collection of Memories «...[I served both people and water...](#)» on occasion of 90-year anniversary of V.A. Dukhovniy .

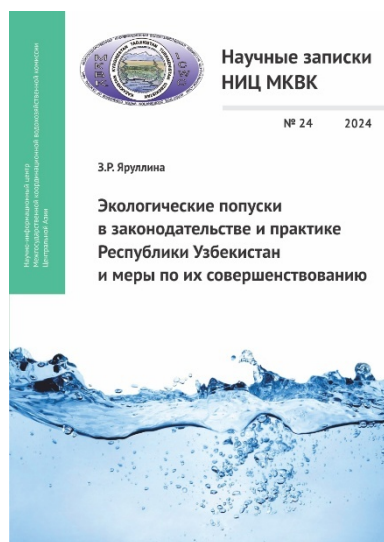
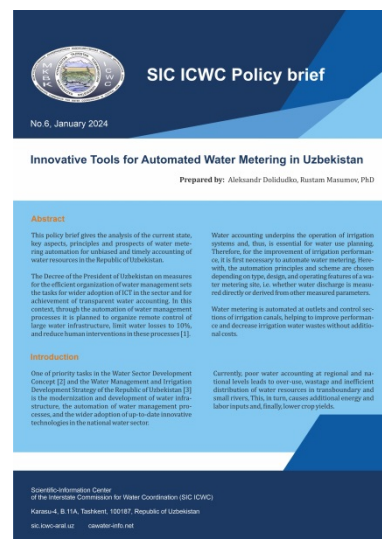
ICWC Bulletins [100-105](#) and SIC ICWC press-releases [445-521](#); Water Yearbook: Central Asia and around the World in Russian and English; Proceedings of the Conference “Water in Central Asia: the Future in Cooperation” dedicated to anniversaries of Prof. Viktor Dukhovniy (posthumously), Mr. Nariman Kipshakbaev, and Mr. Rim Giniyatullin (November 8).

Legal Collections of SIC ICWC: (1) “Concept for the Development of the Water Resources Management System of the Republic of Kazakhstan for 2024-2030”, No.59; (2) “Regulations Governing the Water and Agricultural Sectors of the Kyrgyz Republic, December 2023 – March 2024”, No.60; (3) “Regulations Governing the Water Sector and International Cooperation between the Countries of Central Asia, January-May 2024”, No.61; (4) “Departmental Regulations of the Ministry of Water Resources and Irrigation of Kazakhstan, July-August 2024”, No.62 ; (5) “Comprehensive Water Sector Development Plan until 2028 and the Concept for the Development of the Water Resources Management System of the Republic of Kazakhstan for 2024-2030”, No.63.



Thematic collections: (1) 10th World Water Forum "Water for Shared Prosperity" (18-25 May 2024, Bali, Indonesia); (2) “How the world is tackling with water challenges”, which offers international and regional experience in water security and water resources management; (3) “Innovations in energy: around the world”, Parts 1-6; (4) “Water security: around the world”, Parts 3 and 4, “Water security and challenges to water management: global perspective”; (5) “Climate change: review 2023 –2024 first half”, “Climate change: scientific forecasts and adaptation”, “Climate change: expert opinions”, “Climate change in 2024”; (6) “Water crisis, conflicts and cooperation all over the world”.

SIC ICWC Policy Briefs: (1) Dolidudko A., Masumov R. Innovative Tools for Automated Water Metering in Uzbekistan (Issue 6); (2) Ergashev I. Monitoring of Inflow to the Aidar-Arnasay Lake System from the Shardara Reservoir between 1990-2023 (Issue 7).



Proceedings of SIC ICWC: (1) Yarullina Z.R. Environmental flow in national legislation and practices of Uzbekistan and how to improve it, No. 24; (2) Rakhimova M.N. Studying the current hydrological and hydrochemical regime of the Amu Darya River, No. 25; (3) Sichugova L., Ruziev I., Sorokin A. MODSNOW-based flow forecasts of the Zarafshan, Vaksh, and Naryn rivers for the growing season, No. 26; (4) Dolidudko A. Estimation of mean velocity in open irrigation canals against the surface velocity, No. 27; (5) Stulina G.V., Yarullina Z.R. Natural environment of the Sudoche-Akpetki sanctuary, No. 28.

CAPACITY BUILDING

The ICWC Training Center, established to build the capacity of water professionals in Central Asia (per the 21st ICWC meeting decision), operates within SIC.

In accordance with the 86th ICWC meeting decision (Shymkent, 12 April 2024) to enhance regional and national training, SIC is: posting upcoming training information on the Training Center website and in the "Professional Development Courses and Trainings" section of the Water Yearbook; updating the "Political and Legal Aspects of Water Resources Management in Central Asia" course; and developing new training materials on "Modernization of Management, Operation and Maintenance of Irrigation Systems – a win-win solution for adaptation" and the impact of climate change on water resources. The renovated Training Center premises will soon be open to trainees.

In the course of the year, SIC held:

- **in partnership with SIC ICSD and UNDP Turkmenistan,**¹⁷ 2 workshops for the members of Coordination Mechanism and decision makers and 1 workshop for trainers on integration of adaptation into water planning in Turkmenistan. A teaching guide to the trainers "Integration of adaptation into water planning in Turkmenistan" was published;
- **jointly with IWMI,** a study tour, as part of which a dialogue on transboundary water management and a seminar "Transboundary water cooperation: paving the way from Fergana Valley to South Asia" (Tashkent, Andizhan and Fergana provinces, [June 22-27](#));
- **in partnership with OSCE Office in Astana,** a workshop "Safety of hydrotechnical constructions" for the heads and senior officers from Shu-Talas, Balkhash-Alakol and SyrDarya Basin Inspectorates of Kazakhstan. The workshop included field trip to the Upper Chirchik waterworks facility and the Charvak reservoir (Tashkent, [July 22-24](#)).

As part of MoC between SIC ICWC and "TIAME" National Research University, SIC took part in the process of international accreditation of TIAME and in an introductory meeting to SIC for the bachelors studying in Water management and Land Reclamation (January 26).

The Center's experts delivered lectures: (1) for the staff of the Institute of Legislation and Legal Policy under the President of the Republic of Uzbekistan on "Transboundary water use: legal aspects" (10 May); (2) within the framework of "Training on water diplomacy for the teaching staff of higher education institutions of Central Asia" (5-16 August); (3) at the seminar for the BUIS' staff (November 13, "Suvchilar Maktabi"/"School of

The Regional Training Center (RTC) was established in 2000 to enhance water professional development in Central Asia. In addition to capacity building, the RTC actively promotes regional collaboration in water resource utilization and management, aiming to develop unified approaches among experts and decision makers.

¹⁷ as part of the GCF project "Developing a National Adaptation Planning Process in Turkmenistan"

Water Workers”). On a regular basis, (1) practical trainings for farmers and design engineers on “Hydraulic design of drip irrigation” were organized in “Suvchilar Maktabi”/“School of Water Workers”; and, (2) lectures for students on “Taxes and taxation” in Tashkent State Economic University were delivered.

Collaboration is maintained with the **editorial boards of scientific journals**: Dinara Ziganshina is a governance and law editor of the “Central Asian Journal of Water Resources Research”; Sherzod Muminov is a member of the editorial team of the e-journal “Actuarial finance and accounting” (Tashkent State University of Economics) and the international journal “The World Economics & Finance Bulletin”.

SIC’ team was enriched by three young professionals in the field of hydrology, law and economy. SIC experts enhanced their technical capabilities through several specialized training programs: (1) a course on climate impact assessment on water resources, conducted at the School of Water Workers as part of the CLIMWATER project (Tashkent, July 29-31); (2) training in PyWR¹⁸ water resources system modeling, culminating in certification for application in the Chirchik river basin (Tashkent, November 11-13); (3) participation in the American Councils for International Education's C5+O.N.E¹⁹ program in Uzbekistan; and (4) involvement in the CROWD project, focusing on cross-regional water diplomacy, among other initiatives.

Dr. Ziganshina is a member of the International Water Law Academy, while Dr. Muminov is a member of the Academic Council at the Tashkent State University of Economics (since 2023).

¹⁸ organized by SIC, IWMI, Nexus Analytics, and the University of Manchester as part of the [NEXUS Gains](#) project

¹⁹ with the support of the U.S. Department of State

EVENTS

SIC was engaged in over **60** international events, including:

- 3rd High-Level Conference on International Decade for Action, 2018-2028 in Dushanbe ([June 10-13](#));
- 10th World Water Forum in Bali²⁰ (May 18-24);
- Global Forum Ecumene in Moscow ([September 17-18](#));
- Water Action Agenda Symposium ([April 24](#), online);
- INBO World General Assembly in Bordeaux ([October 7-9](#)), etc.



COOPERATION WITHIN IFAS

SIC ICWC also took part in the activities of the working group on the improvement of institutional and legal framework of IFAS.

In 2024, two meetings of the Working Group (WG) were held: 12th meeting, which summarized activities of the WG for 2021-2023 and outlined key achievements and challenges (Astana, September 4-5); and 13th meeting, where a revised institutional format was proposed (Almaty, [December 12-13](#)). The proposed format was submitted to countries for approval.

SIC cooperated and exchanged information with EC IFAS on the implementation ASBP-4, and, upon the invitation of the EC IFAS Chairman, took part in the sub-regional session “Transboundary Water Cooperation in the Aral Sea Basin for a Better Future” on the sidelines of WWF10 in Bali ([May 22](#)).



²⁰ <http://sic.icwc-aral.uz/releases/rus/474.htm>, <http://sic.icwc-aral.uz/releases/rus/475.htm>, <http://sic.icwc-aral.uz/releases/rus/476.htm>, <http://sic.icwc-aral.uz/releases/rus/477.htm>

INTERNATIONAL COOPERATION

Cooperation within the UN

In the course of the year, SIC was actively engaged with the UN on water.

UNECE and Water Convention

Dr. Ziganshina continued her work as a vice-chair of the Implementation Committee under the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention). In 2024, she took part in: 17th meeting ([March 7-8](#), online); [workshop](#) on transboundary water allocation, WEFE nexus and development of agreements and other arrangements ([April 15-16](#)) and the workshop in support of technical negotiations for drafting a Cooperation Agreement between Zambia and Congo on establishment of a joint body in the Luapula River basin in Zambia ([April 17](#)); national workshop related to the South Sudan's accession process (19 July, online); and, 10th session of the Meeting of the Parties to the Water Convention in Ljubljana, Slovenia ([October 23-25](#)).

Mrs. Yarullina from SIC was engaged in the 14th meeting of the Working Group on Water and Health in Geneva ([April 16-17](#)), the revisiting of water quality standards for water bodies and the Inter-institutional Working Group on prevention of water pollution and tailings safety in Uzbekistan ([September 24](#)), and the workshop on Turkmenistan's accession to the Protocol (October 2).²¹

SPECA

Within the framework of the UN Special Program for the Economies of Central Asia (SPECA), SIC participated in the 27th session of the SPECA Working Group on Water, Energy and Environment (Dushanbe, [November 25](#)) and the SPECA Economic Forum 2024 'Green Development in the SPECA Region', where Dr. Ziganshina made a presentation "Water-Energy-Food-Climate: Modernization of Information and Analytical Tools"²² (Dushanbe, [November 26-27](#)).

UN Framework Convention on Climate Change

SIC [made presentations](#) at two thematic sessions of COP29 ([November 11-22](#), Baku): (1) 'Sustainable water resources: technologies and innovations' organized by the Ministry of Water Management of Uzbekistan (November 18); (2) 'One World – One Climate: Uniting Efforts on Transboundary Adaptation' organized by the Strategic Initiative Agency of the Russian Federation (November 21).

FAO

SIC negotiated with the FAO Regional Office for Europe and Central Asia on the development and implementation of a transboundary component of the FAO/GEF Program 'Central Asia Water and Land Nexus' (CAWLN) to restore ecosystems, improve nature management and increase resilience as part of GEF-8 programme²³ (since March).

²¹ within the framework of the Project on "Strengthening action in Uzbekistan on water and sanitation and protection of water resources from accidental pollution in the face of climate change"

²² At session I: Water, Energy and Climate change

²³ The programme is aimed at supporting national implementation of the Cartagena Protocol on biodiversity

UNEP

Mrs. Yarullina from SIC²⁴ took part in the 14th meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS COP 14) in Samarkand ([12-13 February](#)). Preparatory phase on the UNEP project ‘Facilitating region-specific approaches to addressing climate and environment-related risks for peace and security’ in Central Asia was underway.

World Water Council

SIC as a member of WWC Board of Governors²⁵ took part in a meeting of the task force “Water for human and nature) (February 13, online), two meetings of WWC Board of Governors: (1) 86th meeting, which discussed progress of task forces and ongoing matters. Saudi Arabia was elected to host WWF11 in 2027 on the theme “Action for a Better Future” ([February 17-18, Istanbul](#)) and (2) 87th meeting, where the progress in preparation to 10th World Water Forum was considered ([May 19, Bali](#)).

On the sidelines of WWF10 in Bali, SIC was engaged in a number of events and sessions, including: (1) a side event dedicated to the launch of the UNESCO/UNITWIN Network on Climate Awareness ([May 20](#)); (2) side event "Enhancing Water Security through National Dialogues on Water" ([May 21](#)); (3) the session on water information systems ([May 22](#)); (4) session on transboundary water cooperation in the Aral Sea basin organized by EC IFAS and IWAC ([May 22](#)); (5) “Hydrodiplomacy in transboundary basins” session ([May 23](#)); (6) a high level event dedicated to basin management ([May 23](#)).

International Network of Basin Organizations

SIC supports the activities of the Eastern Europe, Caucasus and Central Asia Network of Water Management Organizations (EECCA NWO), which is one of eight regional INBO networks.

In 2024, SIC took part in the INBO World General Assembly on the common title “Water resources and climate change: how can basin management be more resilient” in Bordeaux, France. SIC’s representative presented on “Ecosystems during Water Scarcity in the Aral Sea Basin: planning and management tools” at the panel session “Water scarcity: planning and tools for quantitative management of water resource at basin level” ([October 7-9](#)).

SIC contributed the articles titled “The International Fund for saving the Aral Sea: 30 Years of the Regional Cooperation”²⁶ and “Improving Water and Energy Coordination in Central Asia” to the regular INBO Newsletter²⁷.

Organization for Economic Cooperation and Development

With the support of OECD, SIC implemented the project ‘National Dialogue on Water Policy in Uzbekistan’, continued the project ‘Regional mechanisms for the low-carbon, climate-resilient transformation of the energy-water-land nexus in Central Asia’ in partnership with UNECE, EBRD and FAO, organized thematic conferences and other events.

²⁴ Mrs. Zulfiya Yarullina is one of authors of the National State of the Environment Report

²⁵ www.worldwatercouncil.org/en/board-mandate-2023-2025

²⁶ <https://www.inbo-news.org/the-international-fund-for-saving-the-aral-sea30-years-of-the-regional-cooperation/>

²⁷ <https://www.inbo-news.org/improving-water-and-energy-coordination-in-central-asia/>

German Agency for International Cooperation

In 2024, the project “Studies on priority issues in the field of water, energy and environment in the Amu Darya and Syr Darya basins” was launched under the contract with GIZ.²⁸ A partnership to hold joint meetings of the Regional Working Group on mutually beneficial water-energy mechanism was established. Mechanisms for implementation of the “Regional climate change adaptation strategy in Central Asia”²⁹ were discussed ([May 13](#), SIC; May 30, online).

International Water Management Institute

SIC took part in IWMI workshops organized as part of the CGIAR Initiative³⁰ on [NEXUS Gains](#) (Tashkent, January 29; Andizhan, October 28-29; Tashkent, [November 14](#)). Discussions were held on SIC’s engagement in the Blue Peace Central Asia 2.0 (BPCA 2.0) Program implemented by IWMI, IUCN and CAREC.

International Water Resources Association

Dr. Ziganshina is a member of the Organizing Committee and the International Scientific Committee for the IWRA’s XIX World Water Congress to be held in Marrakesh, Morocco on [1-5 December 2025](#).

Multilateral development banks

SIC negotiated with representatives of the **Asian Development Bank** on the forthcoming projects of the CAREC Water Pillar (November 27) and on the implementation of work on PyWR-based water-energy nexus modeling.

Engagement with the **World Bank** consisted in preparation of a new project “Water-Energy Nexus Systems Modelling”.

Development of new partnerships

In 2024, SIC continued cooperating with the IHE-DELFT Institute of Water Education, Konrad Adenauer Foundation, and Institute of Strategic and Inter-regional Research at the President of Uzbekistan. The modalities of cooperation with the Agency for Hydrometeorology at the Committee of Environmental Protection under the Government of Tajikistan were negotiated (Dushanbe, [June 10](#)).

Cooperation agreements were signed with: **Space Research and Technology Agency** at the Ministry of Digital Technologies of Uzbekistan on joint geoinformation and satellite-based research in the area of water management, use and protection, ecology, environmental protection, and water and agricultural development; **Korea Rural Community Corporation/KRC** on joint water and irrigation research projects and programs in Central Asia ([November 27](#)).

The review “The relationship between Uzbekistan and Afghanistan on sharing and managing water resources” was prepared for the **University of Tokyo**.

²⁸ As part of the [Programme](#) “Climate-Sensitive Water Resources Management in Central Asia”

²⁹ The Strategy was drafted by the Regional Working Group within the framework of Green Central Asia, presented at COP28 in Dubai, UAE and approved by all the governments of CA countries

³⁰ International agricultural research partnership

Negotiations are held with the **French Development Agency** on the development of an ASBP-4 project “Correction of Hydromodule Zoning (Boundaries of Hydromodule Zones) and Revisit of Crop Irrigation Regimes. The Case Study of the Uzbek Territory of the Fergana Valley in the Syr Darya River Basin.”

MASS MEDIA

An interview was given to Valeria Kipnis, an audio reporter from National Public Radio (NPR) in Washington D.C., on the issues of water allocation and management in the Amu Darya and Syr Darya river basins (May 17).

CONCLUSION: 2024 YEAR-IN-REVIEW AND PLANS FOR 2025

In 2024, we have strengthened partnerships, deepened analytical and scientific approaches, and enhanced efforts for sustainable water and ecosystem management in Central Asia

In 2024:

- Regional cooperation progressed under umbrella of ICWC.
- The CAWater-Info Portal saw modernization and got improved design and new tools.
- SIC's research contributed to practical recommendations for improved water security and adaptation for the region's countries.
- Partnerships enhanced with international organizations, including OECD, UNEP, GIZ, WB, IWMI and many others.
- Engagements in significant international fora, scientific symposia and training enabled exchanges and more solid position of SIC on the world arena.
- The Center published 37 pieces of work, including a Collection of Memories about V.A. Dukhovniy "...I served both people and water...", the Water Yearbook: Central Asia and around the Globe, conference proceedings, research papers, and policy briefs.

In 2025 we plan:

- To continue re-designing and improving the CAWater-Info Portal and the Regional Information System by equipping them with RS and AI technologies.
- To step up work on investigation of instrumentation of gauging stations in the Syr Darya and Amu Darya basins and on development of hydrological forecasting methods.
- Improve analytical support on sustainable water use and protection to the region's countries.
- Continue projects, such as Nexus and Cross-regional learning for transformative water diplomacy, and start new initiatives with key international partners.
- Enhance capabilities of the Expert Platform by examining the opportunities to establish a Regional Center of Excellence in support of youth and women in the water sector.