INTERNATIONAL FUND FOR SAVING THE ARAL SEA

INTERSTATE COMMISSION FOR WATER COORDINATION OF CENTRAL ASIA

# BULLETIN ICWC of Central Asia

July 2025

№ 4 (109)

Scientific-Information Center of Interstate Commission for Water Coordination of Central Asia

Interstate Commission for Water Coordination of Central Asia

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# Meetings of ICWC members

## Trilateral meeting of energy and water ministers of Kazakhstan, Uzbekistan and Kyrgyzstan[1]

On May 14, 2025, the Ministry of Energy of Uzbekistan hosted a regular working meeting attended by: the Minister of Energy of Uzbekistan, J. Mirzamakhmudov; the Minister of Water Management of Uzbekistan, Sh. Khamraev; the Minister of Water Resources and Irrigation of Kazakhstan, N. Nurzhigitov; and the Minister of Energy of the Kyrgyz Republic, T. Ibraev, along with other senior officials.

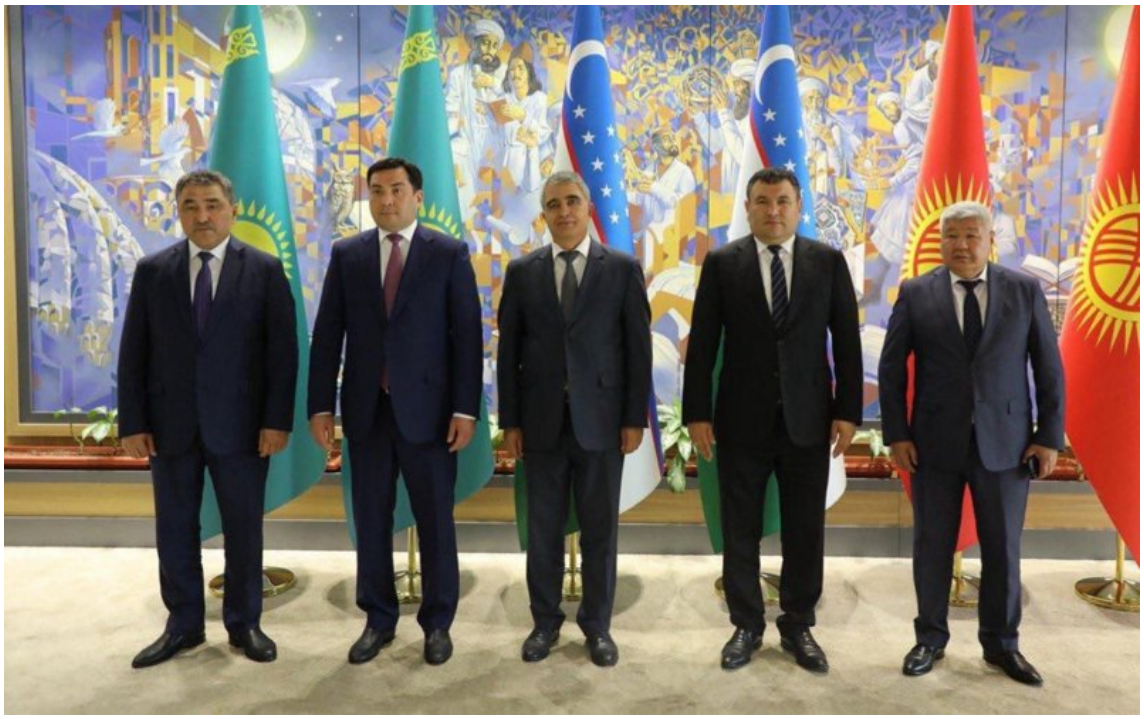
The participants discussed how to ensure stable operation of water and energy systems of the three countries in the upcoming summer period. They also agreed on the schedules of power grid operation.

The jointly implemented projects have been also reviewed. in particular, the current status of the Kambarata-1 project and the matters related to the harmonization of water-energy balance.

As a result of the meeting, a protocol was signed, and the parties agreed to coordinate next events in the near future.

The signing of the protocol marks an important step in the ongoing cooperation among the three countries to ensure the balanced use of water resources and the stable operation of power systems in Central Asia. Regular discussions and agreements on operating regimes ahead of each growing season make it possible to take into account the current hydrological situation and the water and energy needs of each country.

[1] Source in Russian: https://www.inform.kz/ru/kazahstan-uzbekistan-ikirgizstan-soglasovali-vododelenie-reki-sirdarya-06397d https://t.me/minenergy_uz/16283



## Trilateral protocol on summer operation regime of the Bakhri Tojik reservoir signed[2]

A trilateral protocol on the operation regime of the Bakhri Tojik reservoir for 2025 summer months has been signed. The agreement followed negotiations between the Minister of Water Resources and Irrigation of Kazakhstan N. Nurzhigitov, the Minister of Energy and Water Resources of Tajikistan D. Juma and the Minister of Water Management of Uzbekistan Sh. Khamraev. The negotiations took place on the sidelines of the International Conference on Glacier Preservation.

The parties discussed key issues of trilateral water cooperation, including sustainable use of water in reservoirs and coordination of hydraulic structure operations.

As a result, the three countries have signed a protocol outlining the operation regime of the Bakhri Tojik reservoir (also known as the "Tajik Sea") for the period of June to August 2025.

The document outlines the water use mechanisms during the growing season, the distribution of water quantities among the participating countries and sets out coordination procedures in the event of changing hydrometeorological conditions.

## 6th meeting of the Joint Commission of Kyrgyzstan and Uzbekistan on water use issues[3]

The 6th meeting of the Joint Kyrgyzstan- Uzbekistan Commission on water was held in Andijan, according to the Ministry of Water Management of Uzbekistan.

The meeting was co-chaired by Nurlan Jumaev, Deputy Minister of Water Resources, Agriculture, and Processing Industry of Kyrgyzstan, and Shavkat Khamraev, Minister of Water Management of Uzbekistan.

[2] Source in Russian: https://podrobno.uz/cat/obchestvo/strany-tsentralnoy-azii-utverdili-letniy-rezhim-vodorazdela-tadzhikskogo-morya-/

[3] https://kabar.kg/news/kyrgyzstan-menen-zbekstandyn-suu-tarmagyndagy-kyzmattashtygy-zhay-degeelge-chyguuda/

The meeting was attended by managers and specialists from the relevant irrigation departments of Osh, Batken, and Jalal-Abad provinces of Kyrgyzstan, as well as representatives from Uzbekistan.

During the meeting, agreements on water withdrawal from small rivers in the Fergana Valley for the current year and water discharge into the Karadarya

River were reviewed and officially approved.

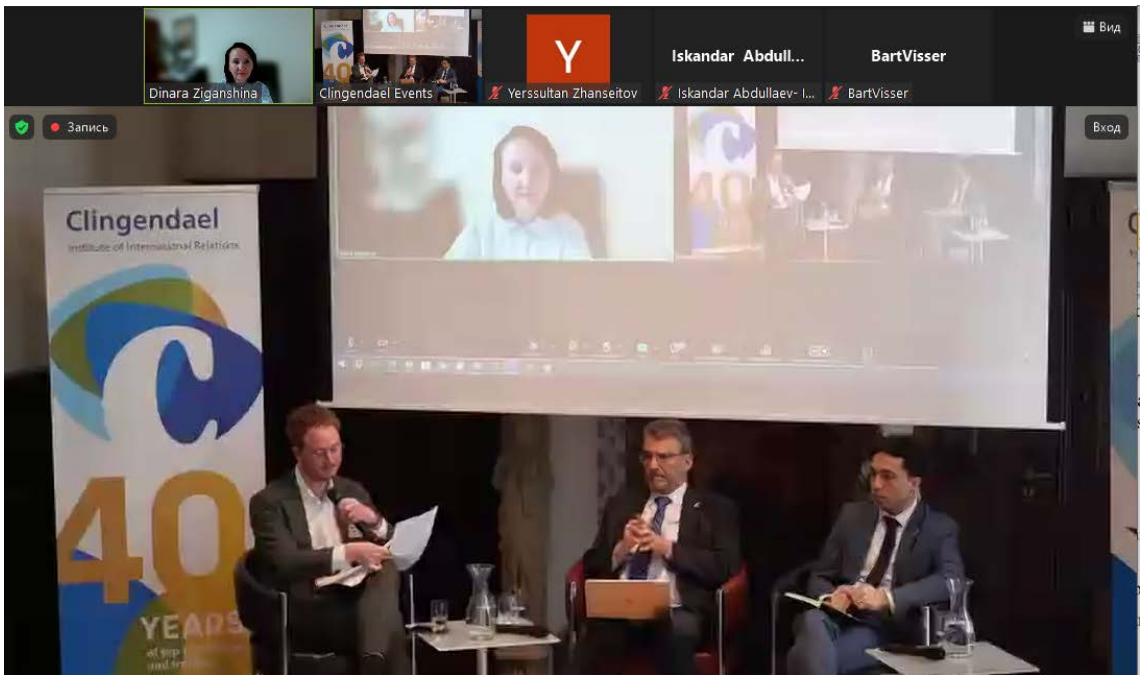
Additionally, sharing water of the Kasansay and Andijan reservoirs was discussed and a decision to establish a bilateral working group was made.

# International and Regional Events

## Strengthening Regional Cooperation on Water: Insights from the Clingendael seminar on Central Asia

On 17 April 2025, the Clingendael Institute, in partnership with the International Tax and Investment Center (ITIC), hosted the high-level seminar "Water Challenges in Central Asia" at its headquarters in Wassenaar, the Netherlands. The hybrid event brought together over 60 professionals from think tanks, academia, diplomatic missions and international organizations, with additional participation via livestream from a global audience.


The seminar addressed pressing water-related challenges facing the Central Asian region, including unequal distribution of resources, aging infrastructure, the legacy of Soviet water systems, and growing pressures from climate change and population growth. Discussions were structured around two expert panels: one focusing on the nature and scope of water challenges, and the second one - on pathways to regional cooperation.


Dr. Dinara Ziganshina, Director of SIC ICWC, participated as an invited speaker in the second panel on regional cooperation. In her intervention, Dr. Ziganshina shared key lessons from over 30 years of regional water cooperation experience in Central Asia, emphasizing the importance of science-based and politically neutral information as the foundation for sustainable water management.

She highlighted three key contributions of SIC ICWC to regional water governance:

1. **Access to information and data:** Maintaining regional databases on water resources, their use and infrastructure status in support of national and

regional authorities in planning and risk analysis.

2. **Facilitation of Expert Dialogue:** Continued support for technical consultations among Central Asian water professionals, ensuring coordination even during periods of political tension.

3. **Evidence-Based Cooperation:** Promotion of nexus assessments, climate-informed planning, and modelling tools that link water, energy, and ecosystem needs across borders.

Dr. Ziganshina also underscored the need to strengthen institutional and legal frameworks to meet emerging challenges, such as climate-induced hydrological changes and increasing variability. Ensuring the participation of youth, women and local communities in cooperation processes is also an important area, she said.

Her message was clear: "Regional cooperation is not an end in itself, but a means to ensure water, food, and energy security for over 80 million people across Central Asia. That is a shared responsibility - and one that requires long-term vision and trust, built day by day, dialogue by dialogue."

## Regional Conference “Integration of Central Asian Countries Amid Global Transformation: Status and Prospects”

On 1 May 2025, a Regional Conference titled "Integration of Central Asian Countries amid Global Transformations: Status and Prospects" was held at the National Library of Tajikistan. The event was organized by the Center for Strategic Research under the President of the Republic of Tajikistan, with support from the Konrad Adenauer Foundation. The conference brought together representatives of analytical centers, academia, and government bodies across Central Asia to discuss pressing issues related to regional integration, security, and sustainable development in the context of global changes.

The Conference featured three thematic sessions:

- Session I: The role of consultative meetings of the Heads of State in the dynamics of integration processes in Central Asia".
- Session II: "Reinforcing regional security capacity amidst global shifts, emerging new challenges and non-traditional threats".
- Session III: "Development of renewable energy in Central Asian countries: status, opportunities and prospects".

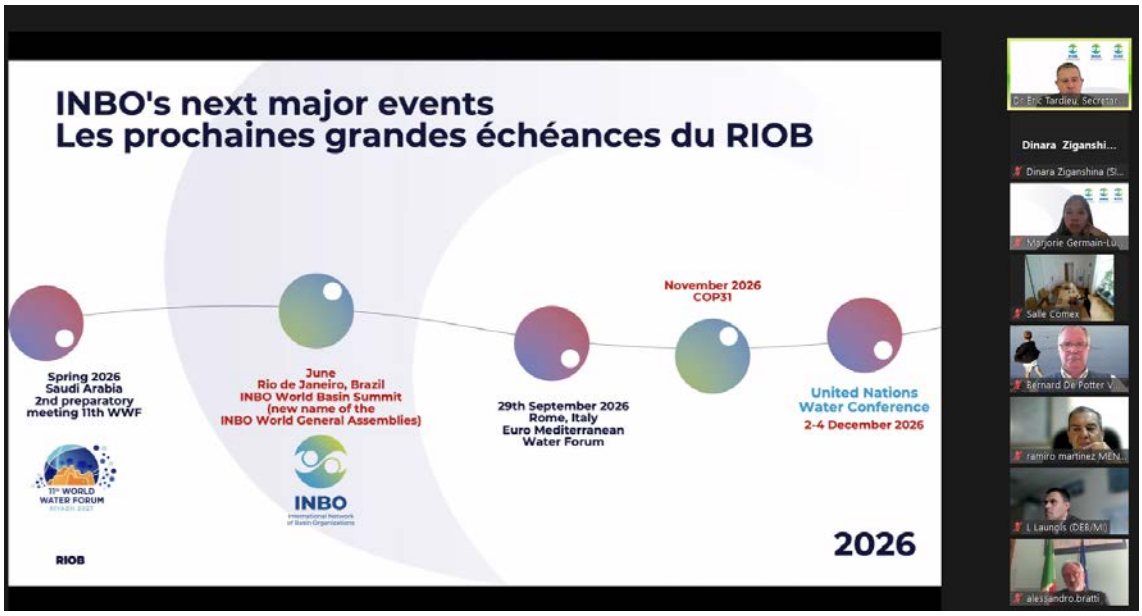

Among the speakers was Dinara Ziganshina, Director of SIC ICWC, who delivered an online presentation "Transboundary water and adaptation to climate change in the Aral Sea basin". She highlighted that the Aral Sea basin is one of climate hotspots on the global map, where risks are intensifying due to a high dependence of economies on water, ecosystem degradation, and projected water shortages. She presented estimates indicating a potential reduction in river runoff by 6-15% and large-scale climate migration - up to 2.4 million people by 2050. She emphasized an urgent need to modernize water infrastructure, strengthen regional cooperation, and implement joint initiatives in monitoring, education, and innovative water management. The presentation was concluded with a call to strengthen institutional coordination among the Central Asian countries in the water sector as a key element for climate adaptation and sustainable development in the entire region.

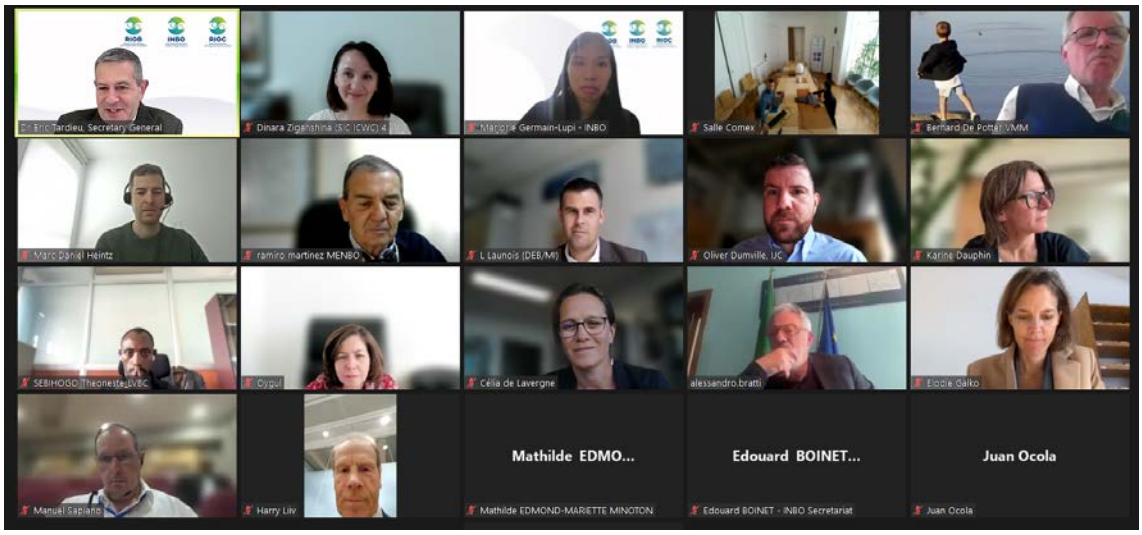
## INBO World Liaison Bureau Members’ Meeting

The online meeting of World Liaison Bureau of the International Network of Basin Organizations (INBO) was held on 6 May 2025. The meeting was held in a constructive atmosphere and brought together representatives of leading basin organizations working on sustainable water management.

The INBO Permanent Technical Secretariat presented updates on the

calendar of events for 2025 and reminded about key areas of activity included in the INBO 2024-2027 Action Plan, while encouraging the Network's members to take a more active role in implementation of the plan. The Secretariat also presented updates on the Twin Basin Initiative and the Peer-to-Peer project aimed at exchanges between basin organizations. The participants reviewed examples of effective collaboration and discussed opportunities for establishing new partnerships.




INBO members shared information on their current activities, achievements and future plans. Particular attention was paid to aligning activities with INBO's overarching priorities and exploring opportunities for engagement in global initiatives.

Dinara Ziganshina, representing the EECCA NWO network, presented activities on the development of intersectoral dialogue and science-policy interface in Central Asia, including the ongoing studies in support of dialogues on Amu Darya and Syr Darya basins, the modernization of the regional information system, and the evolving work on water and heritage in the region.

Finally, the participants identified promising areas of cooperation and outlined priority topics for the next Bureau meeting.

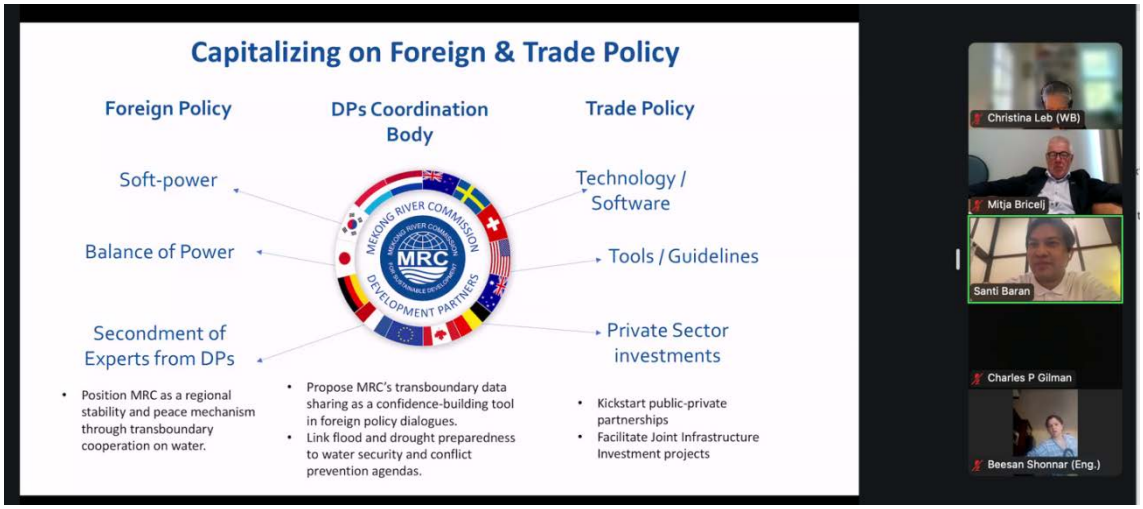
## World Bank Roundtable on Financing Transboundary Basin Development

On 8 May 2025, the first online session of the World Bank Roundtable was held on financing transboundary basin development and gathered experts and decision-makers from around the world to explore financing challenges and solutions for transboundary water cooperation, with a focus on traditional financing mechanisms. The session highlighted persistent gaps between the growing financial needs of basin organizations and the limited availability of stable funding, as well as possible solutions for improving the sustainability and effectiveness of institutions.

The session was opened by Saroj Kumar Jha, Global Director for Water at the World Bank, who stressed the urgency of creating robust and sustainable financing systems to support transboundary basin institutions and achieve long-term cooperation outcomes.

Dr. Susanne Schmeier of IHE Delft underlined that financial resources are a frequently underestimated yet critical element of transboundary basin governance. Traditional public financing sources, including member state contributions and development assistance, were contrasted with private sector involvement, which remains limited due to high perceived risks and low expected returns. Dr. Schmeier concluded with a call for basin countries to strengthen institutional frameworks, mobilize domestic resources, and better align with external donors and potential private investors.


Mr. Santi Baran from the Mekong River Commission Secretariat (MRCS) introduced the MRC's well-developed dual financing mechanism. This includes a pooled Basket Fund composed of member country and donor contributions for core functions, and Earmarked Funds for targeted donor-supported activities. Mr. Baran also presented the concept of the future Mekong Fund, which would require hydropower developers to contribute a portion of their revenue toward cooperative basin management. He emphasized the MRC's role as a platform for stability and conflict prevention, promoting regional data-sharing.




Ms. Birgit Vogel, representing the ICPDR (Danube Basin), presented an alternative model based on strong member state contributions with limited reliance on external donor cycles.

Dr. Dinara Ziganshina of SIC ICWC explained flexible financing arrangements in Central Asia tailored to specific institutional contexts, levels of trust, and administrative realities. Core operational costs of regional organizations such as SIC ICWC and Basin Water Organizations, as well as operation of interstate water infrastructure are funded through the budgets of the

region’s countries as their contribution to IFAS. This system has been successfully functioning for over 30 years. Programmatic costs are partly covered by national budgets and partly through donor assistance. Dr. Ziganshina highlighted that permanent organizations like SIC ICWC and the BWOs benefit from stable teams and fixed locations, which enhances their ability to attract donor support and implement projects. However, she also noted the perceived challenge of bias due to the location of these organizations in one country. In contrast, rotating institutions like the IFAS Executive Committee, which changes every three years, offer equal representation and bring new ideas, but face challenges such as disrupted continuity, frequent leadership changes, and difficulties in securing long-term external funding.


The roundtable closed with additional insights from Kevin Chrétien (DG INTPA) and Dimka Skeie Stantchev (SDC), who reinforced the importance of adapting financing models to regional needs and maintaining a balance between stability and flexibility. The second session of the roundtable is scheduled for July 2025, where the focus will shift to innovative and emerging financing mechanisms.

# 7th Central Asia Climate Change Conference

On 13-15 May 2025, Ashgabat hosted the 7th Central Asia Climate Change Conference (CACCC-2025) held under the theme "Achieving the Global Climate Finance Goal through Regional and National Actions in Central Asia".

The event brought together over 250 regional and international experts, government representatives, and development partners to advance collective climate action.


Parallel Session 3.1 "Water and Energy Nexus in Central Asia under a Changing Climate", held on 14 May and moderated by Mr. Dmitry Petrin (World Bank), focused on promoting operational frameworks (institutions and tools) for integrated water-energy governance and advancing data-driven climate resilience strategies.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CENTRAL ASIA CLIMATE CHANGE CONFERENCE
Achieving the Global Climate Finance Goal through Regional and National Actions in Central Asia
ЦЕНТРАЛЬНО-АЗИАТСКАЯ КОНФЕРЕНЦИЯ ПО ВОПРОСАМ ИЗМЕНЕНИЯ КЛИМАТА
Достижение глобальной цели в области климатического финансирования через региональные и национальные действия в Центральной Азии
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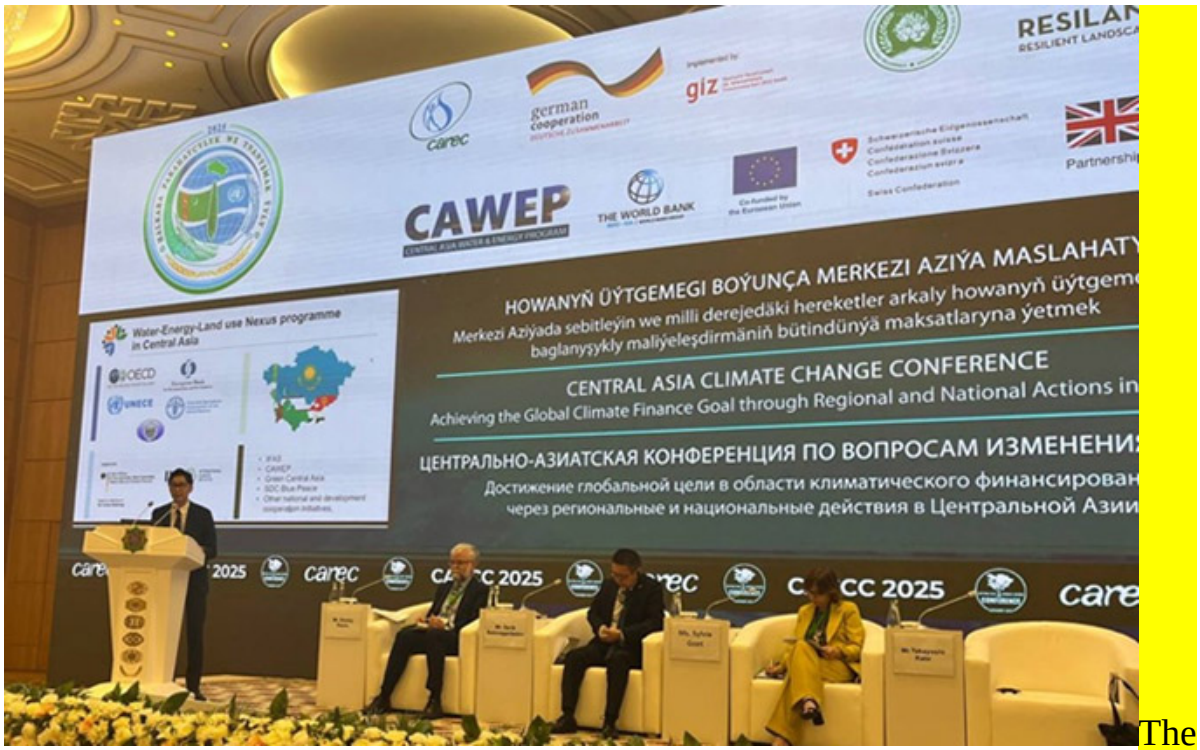
Dr. Dinara Ziganshina, Director of SIC ICWC, presented preliminary outcomes of the regional Water-Energy Modeling project implemented by SIC ICWC in partnership with the CAWEP/World Bank. The project, supported by a technical working group of experts from Central Asian countries, aims to refine integrated WEAP-LEAP models to evaluate the impacts of climate and socio-economic scenarios on water-energy management in the Aral Sea Basin.

Dr.Ziganshina stressed the importance of building a common modeling platform in support of joint water and energy planning, scenario analysis, and coordinated decision-making between riparian countries.

The session also featured a presentation by Mr. Takayoshi Kato, Environmental Economist of the OECD and coordinator of the IKI-funded Nexus project, who underlined the key role of innovative financing mechanisms and regional cooperation to achieve climate-resilient water and energy systems.




The Discussions concluded with practical recommendations to enhance data exchange, scenario modeling, and institutional cooperation across the region, aimed at effectively implementing the water-energy nexus approach.

## 15th Meeting of the Working Group on Water and Health

On 13-14 May 2025, the 15th meeting of the Working Group on Water and Health was held at the Palace of Nations in Geneva. The event was jointly organized by the United Nations Economic Commission for Europe (UNECE) and the World Health Organization (WHO). Zulfiya Yarullina represented SIC ICWC at the meeting.

The primary objectives of the meeting were to review the implementation of the Protocol's program of work for 2023-2025, which was adopted at the sixth session of the Meeting of the Parties to the Protocol (Geneva, 16-18 November, 2022); to discuss the draft program of work for 2026-2028 and the resources needed for its implementation; and, to begin preparations for the seventh session of the Meeting of the Parties to the Protocol (Budapest, 5-7 November, 2025).

In line with the agenda, representatives of both Parties and non-Parties to the Protocol reported on their respective countries' progress toward accession to the Protocol on Water and Health.

Further, information was provided on recent processes and developments at the global and regional levels related to water and sanitation, including: 2030 Agenda for Sustainable Development; 2026 UN Water Conference (to be co-hosted by Senegal and the United Arab Emirates (UAE, 2-4 December 2026)); the United Nations System-wide Strategy on Water Supply and Sanitation; the Budapest Declaration adopted at the seventh Ministerial Conference on Environment and Health and other relevant global and regional commitments in the field of environment and health. A discussion was held after presentations.

Additionally, the meeting addressed the preparation process for the draft Protocol program of work for 2026-2028, which is scheduled for adoption at the seventh session of the Meeting of the Parties. The presentation covered the overall scope of activities, their justification and the institutional framework. The development process included consultations, discussions within various intergovernmental bodies and interview with key experts conducted by consultants. Based on this input, the Presidium developed a draft program of work for 2026-2028 in consultation with leading Parties and countries, taking into account the broader developments in water and sanitation.

During the session focused on improving the governance for water and health through target setting, implementation of relevant measures, and reporting, the Uzbek delegation presented an update on the country's progress in implementing the Protocol's provisions, particularly in relation to target indicators.

At the meeting, Parties shared updates on their activities, including:

- Strengthening capacities for progress monitoring and reporting.
- Improving governance for water and health
- Prevention and reduction of water-related diseases
- Water, sanitation and hygiene in institutional settings and public places
- Safe management of water supply and sanitation systems
- Equitable access to water and sanitation, translating into practice the human rights to water and sanitation.
- Increasing resilience to climate change
- Raising awareness on the Protocol and facilitating accession
- Compliance procedures.

As part of a bilateral meeting of representatives of Uzbekistan and the Permanent Representative of the Ministry of Foreign Affairs of Uzbekistan in Switzerland with UNECE experts, next steps for developing and harmonizing national targets under the Protocol were discussed.

## Expanded Meeting of the Gender Council at the Ministry of Water Management of the Republic of Uzbekistan, the Working Group for the Water Sector Gender Concept and Development Partners

On 16 May 2025, an expanded meeting of the Gender Council was held at the Ministry of Water Management of Uzbekistan with participation of the Working Group for the Water Sector Gender Concept, international development partners and other key stakeholders. The aim of the meeting was to inform the public about the goals and objectives of the Water Sector Gender Concept.


The event was held in a hybrid format and brought together a diverse group of participants, including representatives of the Oliy Majlis (Parliament) of the Republic of Uzbekistan, the Ministry of Water Management, the Asian Development Bank (ADB), the Swiss Agency for Development and Cooperation (SDC), and experts in water management and gender policy.


A video presentation highlighted the development process of the Gender Concept, followed by a formal presentation of the Concept itself. Key speakers

included Dr. Dinara Ziganshina, Director of SIC ICWC, and Shahla Ismail, ADB International Consultant.

The participants shared their views on implementation of the Action Plan as part of the Gender Concept. They also defined the key areas of cooperation and the contribution of the partner organizations in promoting gender equality in the water sector.

The meeting concluded with closing remarks from representatives of government and international organizations, reaffirming their commitment to continued cooperation and support for the successful implementation of the Gender Concept.

## III International Conference “Lakes of Eurasia: Challenges and Solutions”

From 20-23 May 2025, Kazan hosted III International Conference "Lakes of Eurasia: Challenges and Solutions", bringing together scientists, officials, and representatives of international organizations. The conference served as a vital platform for discussing the future of lake ecosystems in the face of climate change and anthropogenic challenges. The event was organized by the Ministry of Science and Higher Education of the Russian Federation, the Russian Academy of Sciences, the Academy of Sciences of the Republic of Tatarstan, the Institute of Water Problems of the North at the Karelian Centre of the Russian Academy of Sciences, and the Institute of Ecology and Subsoil Use of the Academy of Sciences of the Republic of Tatarstan.

The plenary meeting was opened by Ms. L. Abzalilova, Vice-President of the Academy of Sciences of the Republic of Tatarstan, Ms. O. Manidieva, Deputy Minister of Ecology and Natural Resources of the Republic of Tatarstan, and Dr. R. Shagidullin, Director of the Institute of Ecology and Subsoil Use of the Academy of Sciences of the Republic of Tatarstan. The speakers highlighted the importance of scientific and interregional cooperation in addressing the growing climatic and anthropogenic threats to lake ecosystems.


Dr. Dinara Ziganshina, Director of SIC ICWC, member of the Conference's Program Committee, delivered a report titled "Ecosystem Aspects of Transboundary Water Management in the Aral Sea Basin." The report offered a comprehensive analysis of the current state of the basin's ecosystems, addressing the degradation of the Aral Sea, water shortage in deltaic lakes, the impact of climate change on flow of the Amu Darya and Syr Darya Rivers, and the critical need to establish and meet minimum environmental flow.

The conference featured six thematic sessions, covering such topics as hydrology, hydrobiology, hydrochemistry, lake ecosystem functioning, ichthyofauna and fisheries, and the challenges facing lakes in the context of climate change and transformations of water use. Particular attention was drawn to the vulnerability of small lakes, which are especially susceptible to water regime disturbances and pollution.

As part of the Conference, participants visited the natural reserve "Blue Lakes" near Kazan. During the tour, they were introduced to recent improvements, including bank reinforcement, establishment of visitor's centers, swimming areas, walking trails, and birdwatching zones. These efforts aimed to preserve the lakes' natural uniqueness while enhancing their recreational potential.

Participation of SIC ICWC in the conference contributed to deeper scientific exchange and the promotion of an ecosystem-based approach to transboundary water management in Central Asia. The participants expressed an interest in expanding cooperation in scientific and applied research, as well as in the sustainable development and conservation of lake ecosystems.

## Regional Foresight Workshop “Central Asia 2050: Charting Pathways to Shared Prosperity and Stability”

First regional foresight workshop was held in Tashkent on 27-28 May. Ms. Fazilat Abdullaeva participated in the workshop on behalf of SIC ICWC.

The event brought together representatives of government bodies, think tanks, and academic institutions across the five Central Asian republics. Its primary aim was to formulate a shared strategic vision for the future of Central Asia and to establish a sustainable policy-science interface in support of regional initiatives.

The workshop was organized by the Agency for Strategic Reforms under the President of Uzbekistan, in partnership with the Institute for Strategic and Interregional Studies of Uzbekistan (ISIS), the International Institute for Central Asia (IICA), and the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, with the support of the European Union.

The event's agenda focused on projections for the year 2050, highlighting key areas such as demographics, energy, transport integration, human capital development, industrial cooperation, and economic complementarity among the countries in the region. Particular attention was paid to climate change and water management in Central Asia.

It was noted that in recent years, the average temperature in the region has increased by 1.2°C, glacier volume has decreased by 30%, and per capita freshwater availability has dropped from 8,400 to 2,500 cubic meters per year. According to projections, this figure could fall below 1,700 cubic meters by 2030, placing the region on the threshold of countries experiencing severe water scarcity.

Participants emphasized the urgent need to accelerate the transition to renewable energy, reduce greenhouse gas emissions, and promote environmentally sustainable models of production and consumption. The workshop provided a platform for sharing best practices and for the development of joint approaches in advancing green economy and sustainable energy.

Two key objectives were identified during the event: to formulate a common strategic vision for Central Asia’s future, distinguishing between inevitable developments, potential scenarios, and processes contingent on joint decision-making; to establish a sustainable expert network that brings together researchers, government representatives, and policy analysts to support coordinated long-term regional initiatives.

Additionally, as part of the workshop, a call for essays on the future of Central Asia was announced for young people from all five countries. The top 100 essays will be published in a final compilation. Applications are open until June 15, 2025.

SIC ICWC contributed to the discussion of plausible climate scenarios, with the aim of developing flexible and adaptive solutions informed by real-time data and supported by advanced forecasting tools.

# High-Level International Conference on Glaciers' Preservation

**29-31 May 2025, Dushanbe, Tajikistan**

The High-Level International Conference on Glaciers' Preservation aimed to anchor the importance of glaciers and the urgency of stopping the accelerated melting, calving and retreating of glaciers on the international agenda, and advance global efforts in addressing glacier melt and its wide-ranging impacts through collaborative action, scientific innovation, and policy alignment.

Key objectives included advancing scientific research and monitoring to better understand glacier dynamics, addressing the socio-economic consequences of glacier retreat, and promoting integrated adaptation strategies such as early warning systems and disaster risk reduction.

The Conference focused on:

- **Promoting scientific research and monitoring**. Advancing glacier and high mountain cryosphere science including Indigenous knowledge, technological innovations, and monitoring systems. These efforts will enhance understanding of glacier retreat dynamics and their impacts on ecosystems, water resources, and the global climate system.
- **Addressing socio-economic impacts of glacier melting**. Examining the downstream socio-economic consequences of glacier retreat, including its effects on water availability, food security, hydropower, cultural heritage and sea-level rise. The conference will explore actionable solutions to mitigate these impacts and enhance the resilience of glacier-dependent communities.
- **Enhancing climate resilience and adaptation strategies**. Promoting integrated approaches for adaptation and mitigation, including early warning systems, disaster risk reduction, and infrastructure solutions to manage water resources and prevent glacial hazards. The Conference prioritized strategies that enhance community resilience, especially in vulnerable regions.
- **Raising awareness and mobilizing resources**. Increasing global awareness of the vital role of glaciers preservation in ecological balance and socio-economic stability. The Conference sought to mobilize financial and technical resources for glaciers preservation initiatives and facilitate the dissemination of best practices and transformative climate

solutions.

- **Linking water, biodiversity, desertification and climate agendas for sustainable development**. Highlighting the interconnection between water and climate agendas, while exploring opportunities to integrate glaciers preservation into broader efforts to address global water availibility, energy, and food security challenges. The Conference promoted the alignment of glaciers preservation initiatives with long-term development goals.
- **Catalyzing actions through key frameworks and partnerships**. Leveraging key global frameworks, such as the "Pact for the Future", and strengthen partnerships and promote transformative actions in glaciers preservation. This includes creating pathways for collective action to mitigate the effects of glacier melt on global ecosystems and human well-being.

The Pre-Conference Day on 29 May featured several thematic forums:

**1. Agriculture in a Time of Glacier Loss: Addressing droughts, flooding with carbon sequestration and resilience in glacier-dependent regions**

This forum discussed the main water and climate adaptation strategies in agriculture and agrifood systems, best practices and innovations in Central Asia. It examined how to build synergies and alliances between water, land and climate agendas in agri-food systems transformation and how to explore opportunities to integrate glacier preservation into broader efforts to address global water and food security challenges. Additionally, this forum explored the role of youth-led initiatives and the integration of local and traditional knowledge systems with science to guide policies for sustainable mountain development.

**2. Children and Youth Glacier Preservation Forum**

Children and Youth Glacier Preservation Forum has become an essential platform for young people to engage with the critical issue of glacier preservation. It brought together youth from Tajikistan and other countries, using satellite technology to connect participants from across the globe and provide them with the opportunity to share their ideas and solutions for safeguarding glaciers.

The objective of the forum was to advocate for integrating child-centered strategies into national climate and disaster risk reduction (DRR) policies. It emphasized the importance of empowering children to meaningfully participate in climate dialogue and decision-making processes. The Forum will called for

increased climate financing for children, inspiring them to take responsibility and play a leading role in shaping a sustainable future.

**3. Regional Forum on Glacier Monitoring and the Cryosphere in Central Asia**

The Regional Forum on Glaciers and the Cryosphere in Central Asia served as a significant platform for bringing together leading scientists, experts, government representatives, and international organizations. The primary objective of the Forum was to conduct a comprehensive analysis of glacier conditions, monitor changes in the cryosphere, and develop adaptation strategies in response to evolving climate conditions.

This forum facilitated the exchange of advanced knowledge, scientific research, and best practices in the conservation and sustainable use of natural resources. It also aims to strengthen intergovernmental cooperation in the sustainable management of glaciers and water resources. Discussions, expert assessments, and recommendations formulated during the Forum will enable Central Asian countries to develop comprehensive approaches and strategic solutions for effective cryosphere management. This, in turn, ensured the long-term sustainability of ecosystems, water availability, and economic development in the face of a changing climate.

**4. From IYGP to Decade of Action for Cryospheric Sciences, 2025-2034**

The High-Level International Conference on Glaciers' Preservation provides a unique opportunity to discuss the way forward for the Decade of Action for Cryospheric Sciences 2025-2034. The outcomes of the brainstorming session held in Paris were presented and discussed during this forum, linking the objectives of the year to the Decade, and the outlook to the future. Additionally, Forum aims to raise global awareness about the critical role of glaciers, snow, and ice in the climate system and hydrological cycle, echoing the IYGP 2025's focus on advocacy, policy change, and sustainable measures for glacier preservation.

**5. Ministerial Dialogue on Climate Resilience, Glacier Preservation and Water Cooperation**

The Forum promoted glacier preservation through water cooperation across borders, sectors, and generations by bringing stakeholders together to raise their different viewpoints and proactively co-create solutions that build resilient societies – government agencies including environmental ministries, academia, women and youth, the private and finance sectors.

The Forum consisted of two sessions. The first session convened high-level policymakers, particularly Ministers of Environment Protection, to discuss

national strategies and policies for glacier preservation, climate adaptation, and water cooperation. The second session focused on networking and partnerships to bridge conservation efforts with community engagement, particularly involving youth, women, academic society, and private sector.

**6. Enhancing Transboundary Cooperation for Water Sustainability and Climate Resilience in Glacier Dependent Basins of Central Asia**

This high-level Regional Forum brought together policymakers, practitioners, and researchers to jointly explore actionable strategies and innovative solutions for transboundary cooperation and climate adaptation in glacier-dependent basins. This forum served as a platform for advancing regional science-policy dialogue, policy alignment, cross-sectoral engagement and innovative solutions to enhance climate resilience and sustainable development across Central Asia's glacier-dependent river basins. Stakeholders shared best practices, explore policy and investment opportunities, enable science-policy dialogue to develop effective adaptation strategies for glacier-dependent basins.

**7. Towards Sustainable Water Management in Central Asia: The Role of Cryosphere Monitoring in Water Allocation Decision-Making**

This forum highlighted the global challenges posed by climate change, focusing on its accelerated impact on glaciers in the Central Asia region. It discussed the implications of glacier retreat on water availability, natural hazards, and regional stability, emphasizing the urgent need for scientific monitoring, adaptation strategies, and international cooperation to address these challenges. It explored how cryosphere monitoring is integrated into water allocation decision-making across different countries in Central Asia and beyond. A technical session took a deep dive into the role of cryosphere monitoring, hydrological tools, and institutional cooperation in ensuring climate resilience and water availability in Central Asia.

**8. Women Forum on Glaciers Preservation**

The forum brought women together to discuss their role in addressing key environmental and climate challenges, including the accelerated melting of glaciers and changing water resources. In the context of global warming, it is women who play an important role in environmental conservation and sustainable development.

The Forum initiated a platform for women's cooperation on glacier melting, environmental protection and sustainable development to share knowledge, strengthen partnerships and jointly develop solutions. It supported and expanded the network of women leaders active in water management, climate initiatives and environmental sustainability.

18 side events were held in parallel:

- Advances in the Study of Tajikistan's Cryosphere: Current Achievements and Future Directions
- Decentralized Sanitation Solutions Roundtable: Bridging Policy, Technology and Practice
- Adaptation and Resilience to Glacial Hazards
- Glaciers and Science
- Science Diplomacy for Glacier Preservation and Transboundary Water Resilience in the Hindu Kush Himalaya
- The Role of Mass Media and Social Networks in the Study and Preservation of Glaciers
- Isotopes and Innovative Technologies in Glacier Studies
- Water Security and Climate Resilience: Addressing the Environment Challenges in CICA Member States
- Catalyzing Global Action for Glacier Resilience: Civil Society Experience from Central Asia
- Glaciers, the 3rd Pole and the Central Asian Flyway of Migratory Birds
- Melting Point: An Intergenerational Dialogue on Glacier and Water Issues
- Pathways to Action: Tackling Super Pollutants for Glacier Preservation for the High-Level International Conference on Glaciers' Preservation
- Song of Glacier
- Water Resources Stereoscopic Monitoring in Tajikistan
- Strategies for Sustainable Use of Water Resources
- Human Mobility and Climate Change in Mountain Areas: Priorities for action
- Carbon Markets as a Tool for Monetizing Environmental Projects: Lessons for Central Asia
- Climate Science and Research Inventory: A Foundation for Sustainable Solutions in Central Asia

On 30 May, the opening ceremony of the Conference was held, followed by the first plenary session, six thematic sessions, and two leaders’ roundtables.

**Thematic sessions:**

- Glaciers, Arctic and Antarctic ice sheets, the threat of sea level rise and strategies for small island developing states
- From glaciers to sea: glaciers, snowpack and water availability in a changing climate
- Glacial-related hazards and disaster risk reduction: Leveraging the Early Warnings for All Initiative
- Partnership for climate change, glaciers and transboundary cooperation in Central and West Asia Region
- Glacier futures: Linking knowledge, communities and policy for climate resilience

Bridging indigenous knowledge, heritage and community action for glacier preservation

**Leader’s roundtables:**

- Financing for glacier-related adaptation, mitigation and loss and damage
- Making 2025 the 'Tipping point to preserve glaciers' with 1.5 °C-consistent NDCs at COP30

On 31 May, the second plenary session, six thematic sessions, and the closing ceremony took place.

**Thematic Sessions:**

- Glacier monitoring needs worldwide
- Glacier projections and emissions: How much can 1.5 °C emissions pathways save?
- Latest glacier and cryosphere science
- Pact for the Future: How the Pact can inform glacier preservation
- Climate finance and investment for glacier preservation and adaptation
- Zero-carbon development: A path forward for glacier nations

At the closing ceremony, r the chairs of the thematic sessions and pre-conference forums reported.

In conclusion, the resulting documents were adopted, including the Dushanbe Glaciers Declaration and the Dushanbe Call to Action.

## Speech of President Emomali Rahmon at the High-Level International Conference on Glaciers' Preservation[4]

Excellencies, distinguished heads of delegations,

Ladies and Gentlemen!

I cordially welcome you to Tajikistan, which is hosting the first High-Level International Conference on Glaciers' Preservation.

This Conference is an important step towards implementing the United Nations resolution declaring the year 2025 as the International Year of Glaciers' Preservation.

Today's gathering provides a useful platform to exchange views on this vital topic and dialogue on the rational use of water resources.

Dear participants,

The accelerated melting of glaciers has become a global crisis of our time. Over the past few decades, glaciers have been shrinking at a rapid pace. This disturbing process has no precedent in human history.

According to experts' estimates, the largest annual decrease in glacier volume was recorded in 2023.

As a result, 600 gigatons of fresh water were lost, which caused the average global sea level to rise.

Climate change has already caused the loss of about a third of mountain glaciers around the world.

This process is not just an environmental problem, but is closely related to many aspects of human life.

Glaciers are considered to be one of the main sources of drinking water on our planet, and their protection provides the necessary conditions for achieving many of the Sustainable Development Goals.

Along with this, the rapid melting of polar ice caps is causing flooding in coastal countries and cities, leaving millions without shelter.

Moreover, this process leads to a decrease in the land area of countries and becomes a factor in population migration.

It is obvious that without urgent and proactive adaptation efforts consistent with the 1.5 °C goal of the Paris Agreement, this trend will lead to catastrophic consequences.

[4] Source: https://mts.tj/?p=1905&utm_source=chatgpt.com&lang=en

Glaciers and ice sheets play a key role in ocean circulation. They act as natural climate regulators on our planet.

According to experts' assessments, in the case of an increase in greenhouse gas emissions, the economic damage to vulnerable countries will increase accordingly.

If the temperature rises by 2°C, another third of the world's glaciers are expected to disappear.

Therefore, we must make every effort to ensure the implementation of the Paris Agreement on Climate Change and take the necessary measures to prevent an increase in global temperature.

Dear audience,

Rapid glacier melt disrupts water supply processes, threatens food security, and negatively affects the production of clean electricity.

This process, in most cases, creates many risks, increasing economic inequality and the vulnerability of the population.

Our country, with 93 percent of the territory covered by mountains, remains vulnerable against natural disasters related to water, including rapid melting of glaciers.

Tajikistan, which has the largest glaciers in Central Asia, is facing this crisis now.

So far, out of 14,000 glaciers, which are the source of 60 percent of drinking water in the region, 1,300 have completely melted, and the process of rapid melting is still continuing.

The loss of glaciers threatens not only our natural heritage but also the lives of millions of people in the region.

Dear participants of the conference,

I want to note clearly that glaciers' preservation is not just a problem of countries with glaciers but rather a global crisis that deserves the immediate attention of the international community.

The necessary institutions for studying glaciers are active in our country.

At the same time, it is important to note that our scientific and technical capabilities, like those of dozens of other countries with glaciers, are limited.

We need to expand effective cooperation with all partners for the comprehensive monitoring of glaciers, as well as for the planning and implementation of urgent measures to protect glaciers.

In this context, intellectual innovations, together with financial and technical assistance, are also needed.

Tajikistan's glaciers are not only a major source of water for Central Asian rivers but also play a pivotal role in maintaining the stability of the region's climate, and are of great significance for protecting the global climate.

Therefore, the current state of these glaciers requires detailed scientific research.

It is worth noting that studying ice samples from the Vanjyakh (known as Fedchenko) Glacier, which is one of the biggest continental glaciers in the world with a length of 77 kilometers and a thickness of about one kilometer, can reveal thousands of years of climate history for humanity.

Considering the fact that more than 60 percent of the region's glaciers are located in Tajikistan, I propose, in collaboration with development partners and research institutes, to organize a comprehensive expedition to study the glaciers of Tajikistan.

We call on all partners and stakeholders to support this initiative and thus make their relevant contribution to the implementation of the Decade of Action for Cryospheric Sciences, 2025-2034.

Dear audience,

In addition to the main causes of the melting of glaciers, such as global climate change and air pollution, the extreme dust haze has also been accelerating this process in our region for the past few decades.

One of the problems inherent to glaciers in our mountainous country is the risk of glacial lakes collapsing, which can destroy populated areas and infrastructure and, in some cases, even cause loss of life. At the same time, several glaciers in Tajikistan are prone to sliding, which can cause serious issues.

Given the fact that Tajikistan's glaciers are located at altitudes from three and a half thousand meters to seven and a half thousand meters above sea level in difficult mountainous areas, implementing any programs to protect them faces many challenges.

Therefore, we propose to development partners and international organizations to establish fruitful cooperation to address these concerns with us.

Most of Tajikistan's glaciers, including the Vanjyakh (Fedchenko) Glacier, are located in the Pamir Mountain Range.

They are part of the Tajikistan National Park, which is a UNESCO World Heritage Site.

In this regard, the Government of Tajikistan has decided to launch a special program to protect the natural diversity of this unique park.

Dear Conference participants,

Tajikistan has been actively promoting the water and climate agenda on the international stage for the past twenty years, while also emphasizing the need for an urgent and joint response to protect glaciers.

Given the importance of this issue, at the initiative of Tajikistan, based on a resolution of the United Nations General Assembly, the year 2025 was declared the "International Year of Glaciers's Preservation" and March 21 was proclaimed "World Glacier Day." A new United Nations Trust Fund in Support of Activities for Glaciers' Preservation coordinated by the Secretary-General was established.

In this context, it is necessary for states and international and regional organizations to make their possible financial contribution to the Fund for its effective operation.

In addition, at the initiative of the Republic of Tajikistan and the Republic of France, in August last year, the United Nations General Assembly unanimously adopted a resolution declaring 2025-2034 as the "Decade of Action for Cryospheric Sciences."

I believe that support for this resolution will make a significant contribution to advancing the issue of water and climate, especially the effective implementation of the intended goals.

Dear audience,

Given the importance of the statements above, Tajikistan calls on the international community to take urgent and decisive measures to protect glaciers.

In this regard, Tajikistan proposes the following immediate actions to reduce the process of glacier melt:

First. Raise the awareness of the global community about the vital role of glaciers in ensuring drinking water resources and addressing a set of interrelated sustainable development issues.

Second. Strengthen international cooperation, including through the active involvement of scientists and researchers, civil society, and other stakeholders, to address the problem of melting glaciers and its far-reaching consequences.

Third. Conduct comprehensive monitoring and scientific research to better understand the dynamic changes of glaciers and the impacts on ecosystems, water resources, socio-economic issues, and global climate change.

To address this issue, it is proposed that countries with the ability to collect accurate data on the state of glaciers, particularly through satellites, shall establish a regular exchange of information with countries that lack such capabilities.

Fourth. Implement collective actions to address the socio-economic consequences of glacier melting, including its impact on accessing water, ensuring food security, producing electricity, protecting cultural and natural heritage, etc.

In particular, urgent measures must be taken to protect flora and fauna that become deprived of their usual habitats as a result of the melting of glaciers.

Fifth. Most measures aimed at protecting glaciers are closely aligned with measures aimed at addressing climate change.

Therefore, there is a need to assist countries in implementing climate change adaptation programs and strategies, including in vulnerable regions, through integrated approaches, such as early warning systems and disaster risk reduction.

Sixth. Effective use and mobilization of financial and technical resources for the practical implementation of glacier preservation initiatives and make contributions to the United Nations Trust Fund in Support of Activities for Glaciers’ Preservation.

Seventh. Development and implementation of strategies and action programs at national and regional levels.

I also propose to develop a global strategy for glaciers' preservation at the global level.

For its further implementation, it is necessary to build on the experience of other existing mechanisms, such as the Conventions on Climate Change, Biological Diversity, Combating Desertification, and others.

Tajikistan will raise this initiative within the United Nations framework and calls upon all countries to support it.

Distinguished guests,

I am confident that the results of today's Conference, including the Dushanbe Glaciers Declaration and the Dushanbe Glaciers Appeal: A Call for Action, will serve as a call for pragmatic action by the international community to contribute to important global processes.

Furthermore, the results of today's meeting will lay the foundation for the formation of a new Dushanbe Process for Glaciers' Preservation.

Our main goal is to preserve these vital resources through effective joint efforts of the international community for the benefit of present and future generations.

Every lost drop of glaciers contributes to the growing dangers for the future of humanity.

Therefore, let us cherish every moment and contribute to protect the priceless treasure of nature — glaciers — to ensure a bright future for humanity!

I hope that the international community will make greater efforts for the timely implementation of water- and climate-related goals and commitments, especially for the protection of glaciers and the efficient and rational use of water.

Thank you for your attention!

## Regional Forum “Enhancing Transboundary Cooperation for Water Sustainability and Climate Resilience in Glacier-Dependent Basins of Central Asia

On 29 May, a regional forum (Forum 6) titled "Enhancing Transboundary Cooperation for Water Sustainability and Climate Resilience in Glacier-Dependent Basins of Central Asia" was held in Dushanbe as part of the High-Level International Conference on Glaciers’ Preservation. The Forum organized upon ICWC’s decision by SIC ICWC jointly with a number of international organizations, including SDC, OECD, IWMI, WB, GIZ, UNRCCA, and UNECE brought together in total 120 participants, including policymakers, practitioners, and researchers from the Central Asian countries and representatives of international organizations to address the key issues of water, food, energy and environmental security in Central Asia.

This Forum served as a platform for advancing regional science-policy dialogue, policy alignment, cross-sectoral engagement and innovative solutions to enhance climate resilience and sustainable development across Central Asia's glacier-dependent river basins.

The Forum was opened by ICWC members from Kazakhstan and Tajikistan and representatives of water ministries of Turkmenistan and Uzbekistan. They underlined an urgent need for collective efforts in sustainable resource management and ecosystem preservation, while paying particular attention to mountain ecosystems. Development partners in their opening speeches emphasized the importance of well-informed and flexible support to

countries' nexus-based efforts to enhance climate resilience and integrated water resources management at both national and regional levels.

The Forum was comprised of three thematic sessions.

Speakers of Session 1 "Strengthening Transboundary Governance and Policy Coordination" indicated to a growing level of trust among the states that creates a good potential for a deeper coordination and integration. They underlined that regional dialogue, cooperation and trust are essential for efficient use and peaceful management of Amu Darya and Syr Darya rivers, against the backdrop of growing variability and uncertainty, and highlighted the regional mechanisms of cooperation. The need for more active involvement of

Afghanistan's representatives in expert dialogue on climate, water, and ecosystems was highlighted.

Session 2 "Science-Policy Interface for WEFE Nexus" showcased opportunities to leverage data and research for improved climate adaptation. Particular attention was given to the potential use of cryospheric data through emerging tools such as snowMapper, glacierMapper and others. It was emphasized that mountain ecosystems are a key element of sustainable development in Central Asia, and research in this area should focus on understanding their resilience to climate change and developing restoration measures. During the session, SIC ICWC presented preliminary findings of a study on water-dependent ecosystems in the Amu Darya River Basin to inform the GIZ-supported basin dialogue.

Session 3 explored investment pathways and financing mechanisms for resilience, infrastructure development and basin management based on nexus. The session also featured, among other things, the progress made under the IKI Nexus project implemented by OECD, SIC ICWC, and UNECE with the financial support from Germany.

Based on the outcomes of the Forum, the following key messages were formulated:

- Glacier-fed river basins are at the heart of Central Asia's water, energy, food, and ecosystem security - their sustainable management and protection require transboundary cooperation, coordinated planning and due diligence in implementing policy decisions to promote regional stability and development and to reduce risks.
- Bridging science and policy enables the use of all relevant data and tools, early warning systems, modeling, and research findings to inform basin planning and management, resilient infrastructure development, and ecosystem restoration.
- Integrating ecosystem considerations into basin water management in Central Asia from glaciers to deltas - is essential for sustaining water security, preserving biodiversity, and enhancing climate resilience.
- Innovative and "right" financing, aligned with Nexus thinking, is urgently needed to enhance long-term resilience, support sustainable solutions from source to end-user, and ensure equitable benefit-sharing aligned with national and regional priorities.
- The Forum reaffirmed a shared regional commitment to strengthen dialogue, multi-stakeholder partnerships involving governments, the private sector, researchers and civil society and to implement joint solutions for the future of Central Asia - including engagement with Afghanistan.

- The outcome of the Forum was a shared understanding among stakeholders on priorities for water-related climate resilience, reinforced partnerships between national institutions, regional platforms, and international organizations, and knowledge exchange on emerging tools and practices in support of transboundary cooperation in Central Asia.

## Dushanbe Glaciers Declaration

**We, the Heads of Delegation**, high-level representatives of the states, organizations, major groups and other stakeholders having met in Dushanbe, Tajikistan from 29 to 31 May 2025, contributing to the High-Level International Conference on Glaciers' Preservation in our different roles and responsibilities

**Recalling** United Nations General Assembly Resolution 77/158 of 14 December 2022, in which it decided to declare 2025 the International Year of Glaciers' Preservation and to proclaim 21 March of each year the World Day for Glaciers, to be observed starting in 2025,

**Reaffirming** commitment to United Nations General Assembly Resolution 70/1 of 25 September 2015, “Transforming our world: the 2030 Agenda for Sustainable Development”, in which it adopted a comprehensive, far-reaching and people-centred set of universal and transformative Sustainable Development Goals and targets that include a dedicated climate action Goal 13, as well as relevant provisions of United Nations General Assembly Resolution 79/1 of 22 September 2024 “Pact for the Future” in line with national priorities, in which it committed to accelerate efforts to restore, protect, conserve and sustainably use the environment, including forests, mountains, glaciers and drylands,

**Reaffirming also** commitment to the United Nations Framework Convention on Climate Change and the Paris Agreement, including the outcomes of the first Global Stocktake at the twenty-eighth session of the Conference of the Parties that took place in Dubai, United Arab Emirates, from 30 November to 12 December 2023,

**Recalling** United Nations General Assembly resolution 77/172 of 14 December 2022 that proclaimed the period 2023–2027 as Five Years of Action for the Development of Mountain Regions,

**Recognizing** that glaciers and the broader cryosphere are a critical component of the hydrological cycle and that the current accelerated retreat of

glaciers, melting of ice sheets, loss of snowpack and thawing of permafrost are caused by climate change, with severe negative impacts on the environment, human well-being, health, economies, infrastructure, tourism, agriculture, ecosystems and sustainable development,

**Deeply concerned** that, over the past decades, climate change has led to widespread shrinking of the cryosphere, with mass loss from ice sheets and glaciers and reductions in snow cover and permafrost, which have decreased the stability of high mountain areas, increased damage from glacial lake outburst floods and changed the amount and seasonality of runoff and water resource availability from snow dominated and glacier-fed river basins, as well as contributed to localized declines in agricultural yields, water scarcity, loss of the ice memory recorded in glacier layers and increased global mean sea level,

**Emphasizing** that glacier and snow melt significantly affects communities near and far from glaciers, disrupting the availability of freshwater resources that billions of people depend on for drinking water supplies, irrigation, livelihoods and energy production, agricultural productivity, food security, hydropower capacity, tourism, trade, navigation and transportation, and resulting in loss of cultural and natural heritage disproportionately affecting local populations and Indigenous Peoples,

**Stressing** that, in many high mountain areas, glacier retreat and permafrost thaw from global warming are projected to further decrease the stability of slopes, and that the incidences of floods owing to glacial lake outburst or rain-on-snow events, landslides and snow avalanches are projected to increase and occur in new locations or different seasons, further exacerbating the risks of natural hazards and taking note of the Sendai Framework for Disaster Risk Reduction 2015-2030 and the outcomes from its midterm review in May 2023 that committed to accelerate progress on integrating disaster risk reduction into policies, programmes and investments at all levels,

**Realizing** the interconnections between glaciers' preservation and the protection, conservation, restoration and sustainable management of ecosystems as well as their linkage with climate action, biodiversity conservation, disaster risk reduction, and combating desertification, as well as with human development, including the empowerment of women and girls, promotion of traditional knowledge and cultural practices, eradication of poverty and hunger to leave no one behind,

**Noting with concern** the findings contained in the special reports of the Intergovernmental Panel on Climate Change's Sixth Assessment Cycle, especially the special report on The Ocean and Cryosphere in a Changing Climate and the Cross Chapter Paper on Mountains in the Working Group II Contribution on Impacts, Vulnerability and Adaptation,

**Noting also** that continued rise in global temperatures may result in irreversible impacts on certain ecosystems with low resilience such as polar, mountain and low-lying coastal ecosystems impacted by ice sheet, glacier, permafrost and snowpack loss, including accelerated and higher committed sea-level rise,

**Noting further** that decreases in global greenhouse gas emissions are essential to limit glacier and mountain cryosphere losses and ice sheet melt,

**Acknowledging the** first annual observance of 'World Glaciers Day' on 21 March 2025, and taking note of the 2025 edition of the United Nations World Water Day Report, Water Towers: Mountains and Glaciers,

**Highlighting** the importance of advancing related scientific research and continuous monitoring to address the challenges associated with melting glaciers and changes to the cryosphere called for in United Nations General Assembly resolution 78/321 of 13 August 2024 that proclaimed the period from 2025 to 2034 as the Decade of Action for Cryospheric Sciences,

**Recognizing** that the need for a worldwide inventory of existing perennial ice and snow masses that was first considered during the International Hydrological Decade, declared by the United Nations Educational, Scientific and Cultural Organization for the period 1965–1974,

**Acknowledging** the importance of managing responsible adaptation in the face of glacier loss and emergence of post-glacial ecosystems,

**Underscoring** the importance of initiatives related to the Earth's cryosphere for the achievement of the 2030 Agenda and its Sustainable Development Goals, the Decade of Action on Cryospheric Sciences 2025-2034, and the International Decade for Action, "Water for Sustainable Development" 2018–2028,

**Taking note** of the convening of the United Nations Conference on the Midterm Comprehensive Review of the Implementation of the Objectives of the International Decade for Action, "Water for Sustainable Development", 2018-2028, held from 22 to 24 March 2023 in New York, which generated significant momentum towards enhancing water action and political commitment at all levels, including through the Water Action Agenda, to address water-related challenges, and outcomes of the Third High-level International Conferences on the International Decade for Action "Water for Sustainable Development", 2018–2028 held in Dushanbe from 10 to 13 June 2024, which called for support for the implementation and widespread celebration of the International Year of Glaciers' Preservation in 2025 and the annual celebration of the World Day for Glaciers on 21 March,

**Emphasizing** that the International Year of Glaciers' Preservation 2025

and the first International High-Level Conference on Glaciers' Preservation has enhanced common efforts and support for addressing the social, economic and environmental challenges and opportunities for the preservation of glaciers for present and future generations,

**Forward-looking key messages**

We, invite and encourage all decision-makers and stakeholders to take action in order to:

**Stress** the urgent need to raise awareness of and facilitate actions towards the preservation of glaciers, snowpack, post-glacial ecosystems and to promote their socio-economic benefits and the conservation of biodiversity, including through transboundary cooperation as appropriate,

**Promote** integrated approaches for climate mitigation, adaptation and resilience, to manage water resources sustainably and mitigate hazards from a rapidly declining cryosphere, including disaster risk reduction, early warning systems, infrastructure and nature-based solutions as well as sustainable agrifood systems,

**Ensure** effective measures for adaptation and to avoid further loss and damage, which also require reliable and sustained glacier, snowpack and permafrost monitoring to inform future projections and preparedness,

**Foster** cooperation and partnerships between scientific institutions and relevant stakeholders on mountain cryosphere monitoring and research at various levels, and promote availability of research results and findings to all stakeholders in order to develop public policies and programmes at international, regional, national, sub-national and local levels,

**Recognize** the financial gap for glacier-related adaptation as a pressing need, given that even in low emission scenarios, loss of glacier ice and reduced snowpack will necessitate some level of adaptation to changing water supplies and increasing hazards,

**Enhance** embedding glaciers' preservation into risk management frameworks and investment strategies to mitigate financial and environmental risks and drive economic resilience,

**Promote** the participation of stakeholders, including women, youth, local communities and Indigenous Peoples in glacier-related processes, recognizing the value of traditional and Indigenous Peoples' knowledge and local communities for sustainable solutions,

**Enhance** capacities and capabilities of the next generation of scientists and practitioners working on glacier and cryosphere-related issues using a multipronged approach that integrates education, mentorship, field experience

with policy engagement and the development and use of innovative tools and technologies to bridge science, policy and local knowledge,

**Gathered in Dushanbe for the High-level International Conference on Glaciers' Preservation, we declare our commitment to the following actions, according to our respective capabilities:**

**1. Affirm** the importance of glaciers and broader cryosphere for the global sustainable development, environment and climate agendas;

**2. Look forward** to the thirtieth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in Belém, Brazil, from 10 to 21 November 2025, as an opportunity to urge governments and other stakeholders to bring more ambitious Nationally Determined Contributions consistent with real and lasting glacier preservation and to ensure that the preservation of glaciers and broader cryosphere and adaptation efforts remain at the forefront of global climate action;

**3. Strengthen** the linkages between water, glaciers and the broader cryosphere, disaster risk reduction and climate action through the 2026 United Nations Water Conference to Accelerate the Implementation of Sustainable Development Goal 6: Ensure availability and sustainable management of water and sanitation for all and the 2028 United Nations Conference on the Final Comprehensive Review of the Implementation of the Objectives of the International Decade for Action, “Water for Sustainable Development”, 2018–2028, as well as the eighth session of the Global Platform for Disaster Risk Reduction as the main global forum to assess and discuss progress on the implementation of the Sendai Framework for Disaster Risk Reduction;

**4. Encourage** governments and stakeholders, including international finance institutions, the private sector, bilateral donors, inter-governmental and non-governmental organizations, to mobilize financing on a voluntary basis, as appropriate, to limit and adapt to glacier and snowpack loss, mitigate cryosphere-related hazards, conserve biodiversity, and enhance ecosystem services, including to voluntarily join Tajikistan's contribution to the trust fund coordinated by the United Nations Secretary-General to support glaciers’ preservation activities;

**5. Pledge to raise** the status of glaciers and the cryosphere, the projected loss of much of the cryosphere to climate change, and the devastating impacts on downstream people and ecosystems, including due to rising sea levels, throughout the International Year of Glaciers' Preservation 2025, as well as the Decade of Action on Cryospheric Sciences, 2025-2034, in all relevant forums and venues;

**6. Recommend** registering the actions and partnerships proposed during the High-Level International Conference on Glaciers’ Preservation, as well as

during all other relevant conferences and events, as voluntary commitments on the United Nations SDG[5] Actions Platform, including in the Water Action Agenda[6] as appropriate, and providing regular updates on their progress;

**7. Encourage** the launch of a Global Glacier Agenda with a view to elevating the importance of glaciers as well as the broader cryosphere in the global sustainable development, environment, oceans, water and climate agendas, while ensuring coherence and complementarity with existing initiatives, including in support of the International Year of Glaciers' Preservation and Decade of Action for Cryospheric Sciences 2025-2034;

**8. Express our sincere appreciation for the hospitality extended by the Government and People of Tajikistan and the support of the United Nations and of all the partners who contributed to this important conference.**

*Adopted in Dushanbe, Tajikistan on 31 May 2025 by acclamation.*

## Regional Dialogue on Water Diplomacy: Challenges, Solutions and Partnerships

On 4 June 2025, the Central Asian University on Environment and Climate Change (Green University) hosted a workshop titled "Regional Dialogue on Water Diplomacy: Challenges, Solutions, and Partnerships." The event brought together approximately 50 participants, including representatives of government agencies, regional and international organizations, academia, and civil society. Ms. Dinara Ziganshina, Director of SIC ICWC participated in the workshop.

This workshop marks the first one in a series of water diplomacy events organized as part of the joint Uzbek Ministry of Ecology, Environmental Protection and Climate Change, UNDP and GEF project "Conservation and Sustainable Management of Lakes, Wetlands, and Riparian Corridors as Pillars of a Resilient and Land Degradation Neutral Aral Basin Landscape Supporting Sustainable Livelihoods".

[5] UN Action Platform on SDGs. Available at: https://sdgs.un.org/partnerships
[6] UN Water Agenda for Action. Available at: https://sdgs.un.org/partnerships/action-networks/water

The workshops series aims to foster a comprehensive regional dialogue and encourages Central Asian states to collaborate in achieving a balanced and efficient use of shared water through the following:

- Discussing prospects for transboundary water cooperation between Uzbekistan and other riparian countries in the Aral Sea Basin.
- A multi-stakeholder dialogue on integrated water resources management programming.
- Showcasing successful examples of regional water policies in Central Asia and best water use practices.
- Providing an inter-agency cooperation platform to support sustainable water use and land degradation neutral, climate-smart and water-saving agriculture.
- Highlighting the interconnectedness of land degradation, climate change, and water security.
- Engaging representatives of government agencies, NGOs, academia, and women and youth groups in open discussions on shared challenges and opportunities for collaboration.

Ms. Ziganshina delivered a presentation on "Transboundary Water Cooperation under umbrella of ICWC: Achievements and Prospects." The participants were introduced to the structure and functions of ICWC and its executive bodies - SIC ICWC, BWO Amu Darya and BWO Syr Darya.

She listed the following key areas of activity of SIC ICWC:

- Research, consultancies, data collection and dissemination.
- CAWater-Info platform, which facilitates information exchange (supported by the International Climate Initiative (IKI) - and the Government of Germany).
- Professional development courses for specialists from the Central Asian countries, including practical training in modeling tools such as WEAP and LEAP as part of a project with the World Bank and SEI on water-energy nexus systems modeling.
- Expeditions to the dried seabed of the Aral Sea.
- Joint ecosystem preservation initiatives in the Amu Darya basin (supported by GIZ).
- Supporting the implementation of environmental commitments under international agreements.

Among the most recent initiatives of SIC ICWC is the establishment of the Central Asian Expert Platform on water security and sustainable development. This platform aims to support the development of scientific evidence-based regional policies.

As the key future tasks, Ms. Ziganshina mentioned the following:

- Strengthening basin-wide and cross-sectoral planning.
- Implementation of automated water accounting and forecasting systems.
- Adaptation to climate change.
- Developing a legal and economic framework for sustainable water use.
- Promoting investment in education and science.

## Global Workshop on Freshwater Ecosystem Conservation and Restoration in Transboundary Basins

SIC ICWC participated in the Global Workshop on Freshwater Ecosystem Conservation and Restoration in Transboundary Basins, which was held on 16-17 June 2025 in Geneva. The workshop was organized with the support of the European Union, Slovenia, France and the multi-donor trust fund of the Water Convention. The workshop brought together a diverse group of participants, including representatives of international organizations, government agencies and leading experts to discuss the critical role of freshwater ecosystems and the importance of transboundary cooperation in ensuring their sustainable conservation and restoration.

The program included six thematic sessions, group work focused on developing solutions, and a field trip illustrating the successful cooperation between Switzerland and France in restoring shared water ecosystems. The Water Bureau of the Canton of Geneva coordinated this initiative.

The main topics of the meeting were:

- Session 1: Transboundary freshwater ecosystems: what are we talking about?
- Session 2: Legal frameworks, policy actions and institutional aspects of the conservation and restoration of freshwater ecosystems
- Session 3: The conservation and restoration of freshwater ecosystems in a transboundary context: a dynamic relationship between transboundary water cooperation and biodiversity protection
- Session 4: Solutions, part 1 - Unlocking concrete approaches and tools to accelerate the protection and restoration of shared freshwater ecosystems
- Session 5: Solutions, part 2 - Funding and financing the protection and restoration of shared freshwater ecosystems
- Session 6: Future activities on the protection and restoration of freshwater ecosystems in transboundary basins and closing session

The meeting addressed key issues related to transboundary freshwater ecosystems, with a focus on their legal frameworks, policy development and institutional arrangements. Participants emphasized the importance of strengthening and implementing international and regional legal and regulatory frameworks for the conservation and restoration of freshwater ecosystems, including initiatives such as the EU Water Framework Directive&Nature Restoration Regulation.

Special attention was given to practical solutions and tools aimed at accelerating the conservation and restoration of transboundary freshwater ecosystems. These included ecological solutions and the sustainable management of shared peatlands. The workshop also featured case studies demonstrating successful examples of transboundary cooperation, such as the UNESCO Mura-Drava-Danube Transboundary Biosphere Reserve and the TRIWA LIFE project on the Torne River shared between Finland and Sweden.

Financial mechanisms, including initiatives by the World Bank, the private sector, as well as trust and water funds were recognized as essential tools for scaling up efforts in ecosystem restoration.

Session 6 focused on outlining future activities for the protection and restoration of freshwater ecosystems in transboundary basins as part of the Water Convention. The session concluded with a set of key conclusions and recommendations.

# 9th Meeting of the Task Force on the Water-Food-Energy-Ecosystem Nexus

The Ninth meeting of the Task Force on the Water-Food-Energy-Ecosystems (WFEE) Nexus organized under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes took place in the Palace of Nations in Geneva, Switzerland on 18 June 2025.

The event brought together representatives of states, international organizations, academia and practitioners to discuss issues related to integrated approaches to the natural resource management. Special attention was paid to the role of ecosystems in ensuring water, energy and food security.

The agenda of the meeting covered the following key topics: (1) Why ecosystems are at the heart of the WFEE Nexus; (2) Water allocation and flow regulation: balancing water, hydropower and ecosystems; (3) A WFEE Nexus approach for more effective climate action.

The Task Force also elected its Chair for 2025-2027, and upcoming intersectoral activities under the Water Convention were announced.

Aurika Galustyan participated on behalf of SIC ICWC at the panel session “Why ecosystems are at the heart of the WFEE Nexus” and made a presentation titled “Integrating ecosystems into WEFE Nexus governance to provide practical inputs to regional and national policy dialogues” (examples from Central Asia). She focused on two areas of work: (1) Integration of nexus approaches and ecosystem solutions into basin planning: , Amu Darya basin case-study (Studies on priority issues in the field of water, energy and environment in the Amu Darya and Syr Darya basin project funded by GIZ); and, (2) Development of practical toolkits or Nexus Profiles to support ministries and agencies in the region at the national level in operationalizing nexus principles in their mandates and strategies (Regional mechanisms for low carbon, climate resilient transformation of the energy, water and land nexus in Central Asia project, financed by the German government as part of International Climate Initiative/IKI). The meeting was a logical continuation of the Global Working Meeting on the Conservation and Restoration of Freshwater Ecosystems in Transboundary Basins, held the day before. Both events emphasized the growing need to integrate ecosystem considerations into natural resource management, particularly in the context of climate change and increasing cross-sectoral challenges

## International conference “Bridges of Knowledge and Water: Italy and Central Asia Deepen Cooperation for Sustainable Development”

In the Joint Declaration[7] adopted at the Italy-Central Asia Leaders' Summit (1+5 format) held on 30 May 2025 in Astana, the Heads of State advocated for enhanced knowledge exchange to more effectively address shared global challenges such as energy, water resources, sustainable agriculture, irrigation, healthcare, and connectivity. They also welcomed the establishment of Knowledge Networks between the countries of Central Asia and Italy.

On 19 June 2025, Ca' Foscari University of Venice hosted the international conference "Of Bridges and Nexuses: Italy-Central Asia Cooperation towards a Sustainable Future", which served as the first concrete step toward implementing the commitments made at the Summit and focused on developing robust Knowledge Networks between the two regions.

Organized by Ca' Foscari University with the support of the Italian Ministry of Foreign Affairs and International Cooperation, the conference

[7] https://qazinform.com/news/central-asia-italy-summit-joint-declaration-adopted-99e855

gathered representatives from academia, international organizations, public institutions, and the business sector. The agenda centered on key thematic areas of the Italy-Central Asia dialogue: water management, public health, sustainable agriculture, connectivity, and higher education.

**Water as a Priority Focus**

The opening session, "Water and Health", featured a presentation by Dr. Dinara Ziganshina, Director of SIC ICWC. Her intervention provided an overview of regional and national water governance initiatives in the Aral Sea Basin. Key highlights included achievements of the ICWC over the past 30 years; the status of national water management plans and strategies across Central Asian countries; Uzbekistan's accession to the UNECE Protocol on Water and Health, marking a milestone toward a cross-sectoral approach to water and health.

Special attention was given to the IKI Nexus project, funded by the Government of Germany, which promotes the Water-Energy-Food-Ecosystems Nexus approach. Within the project, Nexus Profiles are being developed for governmental institutions, analytical capacity is being strengthened, and cross-sectoral dialogue is being facilitated across the region.

**Looking Ahead**

Participants emphasized the importance of regular platforms for knowledge exchange, innovation, and best practices, supported the development of joint research and pilot projects, and expressed strong interest in continuing such multistakeholder events on a rotational and institutionalized basis. Regional water issues, they agreed, must remain central in the broader intergovernmental cooperation agenda.

**About Ca' Foscari University**

Founded in 1868, Ca' Foscari University is the oldest higher education institution in Venice and a leading center of academic excellence in economics, international relations, environmental science, and languages. The university actively promotes ecological research, interdisciplinary collaboration, and international cooperation, including in the area of sustainable water governance, in line with the Triple Mission of universities: education, research, and societal engagement.

# International Scientific-Practical Conference “Scientific Approaches to Addressing Global Environmental and Water Challenges in Central Asia”

An international scientific-practical conference "Scientific Approaches to Addressing Global Environmental and Water Challenges in Central Asia" took place in Tashkent on 20 June. The conference was dedicated to the 100th anniversary of the Research Institute of Irrigation and Water Problems (formerly SANIIIRI).

The Conference addressed such pressing topics as the role of science in sustainable water management, adaptation to climate change, innovative solutions, and transboundary cooperation.

In total, the conference attracted around 200 participants, including 42 international guests. The majority of attendees were representatives of leading universities and research centers in Uzbekistan.

The Conference was organized around research sessions in the following areas:

- Transboundary water and energy management
- Water saving technologies
- Digitalization and innovations

- Safety of hydraulic structures
- Land reclamation in the context of climate change

During the conference, scientists and engineers who have worked many years in this sphere, as well as the institute's international partners, were honored with special awards.


*Opening speech by H.E. Shavkat Khamraev,*
*Minister of Water Resources of Uzbekistan*


*Welcome by H.E. Nurjan Nurjigitov,*
*Minister of Water Resources and Irrigation of Kazakhstan*

The session "Scientific foundations of irrigated land reclamation in the context of climate change" was held at SIC ICWC's Training Center with the support of the Germany-financed IKI Nexus project implemented by OECD, SIC ICWC and UNECE.

Following the reports and discussions during the session, the participants reached a consensus that:

- Scientific and technological advancements, including digital and geo-information technologies with AI elements, are effective tools for monitoring and assessing the state of land.
- The impact of natural and anthropogenic factors on interstate (transboundary) water resources calls for integrated management and coordination at international level.
- Managing the water-salt balance and drainage systems in arid regions is key for water and land sustainability and ecosystem protection in Central Asia.
- Adoption of alternative energy sources and biotechnologies helps to improve the irrigation efficiency and mitigate negative environmental impacts.

Three leading international experts participated in the conference as part of the efforts aimed at designing the regional Center of Excellence on the base of the Expert Platform on water security, sustainable development and future studies.

Their participation was intended to strengthen scientific and institutional collaboration in the region and to contribute to expert assessments and ideas that could form the basis for the future Center's concept. Two of the invited experts spoke at dedicated conference sessions, sharing their experience on adaptation of water management to the context of climate change, dissemination of adaptive water-saving technologies. These topics have been chosen as the key thematic areas for the future Center of Excellence. Thus, these experts contributed to regional dialogue and promotion of science-informed solutions, that corresponds to the core objectives of the implemented initiative.

* * * *

The first Scientific Research Institute of Irrigation in Central Asia was established in 1925 in Tashkent on the initiative of Professor V.D. Zhurin. On July 1, 1926, the Experimental Research Institute of Water Management was formed through the merger of the Hydrotechnical Institute and the Hydrometric and Hydromodular departments. After several reorganizations, in 1932, the institute was renamed the Central Asian Scientific Research Institute of Irrigation (SANIIRI), a name it became widely known by.

In 1986, the Scientific and Production Association “SANIIRI” was created based on the institute, enabling the implementation of the principle “from scientific idea to widespread application.” This period marked the launch of efforts to introduce water-saving technologies and drip irrigation. Additionally, Basin Water Organizations (BWO) for the Amu Darya and Syr Darya rivers were established.

In 1992, the institute came under the jurisdiction of the Ministry of Water Management of the Republic of Uzbekistan, where it continued its work.

According to Resolution No. 33, dated February 7, 2012, of the Cabinet of Ministers of the Republic of Uzbekistan, titled “On measures to further optimize the structure and improve the activities of scientific institutions of the Academy of Sciences of the Republic of Uzbekistan,” the Institute of Water Problems of the Academy of Sciences was merged with the Scientific and Production Association SANIIRI of the Ministry of Agriculture and Water Resources. On this basis, the Scientific Research Institute of Irrigation and Water Problems was established within the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIIAME). Subsequently, the Institute was transferred to the Ministry of Water Management of Uzbekistan.

# Project activities

## Training of Trainers on Climate, Peace and Stability

The training of trainers was held within the framework of the UNEP Project “Facilitating region-specific approaches to addressing climate and environment-related risks for peace and security” in Central Asia in the Training Center of SIC ICWC on 10-11 April 2025.

From SIC ICWC, Sherzod Muminov, Boris Gozhenko, and Alexander Dolidudko participated in this session The training was conducted by EU-UNEP representatives Rebecca Leanne Farnum and Raphael Moser.

The objective of this training was to officially launch the EU-UNEP action in Central Asia, which would cover three countries, such as Uzbekistan, Kyrgyzstan and Tajikistan. The mission aimed to establish a shared understanding of the project's objectives, operational framework, and expected outcomes, while also laying the foundation for successful implementation.


As a result, SIC's experts gained needed technical skills and knowledge for efficient implementation and upscaling of project measures at the national and regional levels

## Project “Facilitating region-specific approaches to addressing climate and environment-related risks for peace and security

The UNEP Project "Facilitating region-specific approaches to addressing climate and environment-related risks for peace and security" in Central Asia aims to assist fragile and crisis-affected regions and communities to achieve resilience and sustain peace by addressing the climate and environmental risks.

The Project will seek to equip and empower local actors in the Ferghana Valley, spanning across Uzbekistan, Kyrgyzstan and Tajikistan, and to broaden engagement to a broader set of stakeholders in order to scale up action to address climate related risks.

The project manager Sherzod Muminov and project expert Boris Gojenko together with local executors visited Sugd province, Tajikistan from 14 to 17 April. During the visit they had meetings with the Agency of Land Reclamation and Irrigation at the Government of Tajikistan, the Syr Darya River Basin Water Resources Administration, the Irrigation and Land Reclamation Agency, the Hydrometeorological Center, the Basin Women’s Forum, the Youth environmental group, and the "Woman and Society" Association.


From 21 to 27 April, SIC ICWC’s staff and local project executors visited Batken, Zhalal-Abad and Osh provinces in the Kyrgyz Republic. As part of the visit, meetings were organized with representatives of the provincial administration, the Office of the Plenipotentiary Representative of the President

in Batken province, the Department of Agriculture, Land Resources, and Infrastructure Development at the Office of the Plenipotentiary Representative of the President in Zhalal-Abad and Osh provinces, the Provincial Water Management Authority of Batken province, the Zhalal-Abad Basin Water Authority, the Regional Office of the Ministry of Natural Resources, Ecology, and Technical Supervision in Zhalal-Abad province, the Regional Office of the Ministry of Natural Resources, Ecology, and Technical Supervision of the Kyrgyz Republic in Osh province, and the Osh Basin Water Authority.

From 28 April to 2 May Mr. Muminov, Mr. Gojenko and local project executors visited Andizhan, Namangan and Fergana provinces in the Republic of Uzbekistan. The project team had meetings with representatives of the Naryn–Karadarya Basin Irrigation System Authority, the Hydrometeorological Center of Andizhan province, the Naryn–Syrdarya Basin Irrigation System Authority, the Department of Agriculture of Namangan province, the Department for Canal Operation in the Fergana Valley, the Fergana Provincial Hydrometeorology Center, the Environmental Protection Department of Fergana province, and the Main Canal Operations Authority of the Fergana Valley.

During the meetings, water management, climate, environmental, infrastructural, and socio-economic issues of the region were discussed, as well as vulnerability, impacts, and adaptation matters. As a result of the field research, expert opinions were collected to identify climate change hotspots and the most vulnerable areas.

## Second meeting of the expert group on the project “Studies on priority issues in the field of water, energy and environment in the Amu Darya and Syr Darya basins”

The project titled “Studies on priority issues in the field of water, energy and environment in the Amu Darya and Syr Darya basins” is implemented with the support of the German Society for International Cooperation (GIZ) as part of the regional program “Climate-sensitive water resources management in Central Asia” under the broader “Green Central Asia” initiative.

On November 30, 2023, during the first meeting of basin dialogues on the Amu Darya and Syr Darya River basins, participants agreed to prioritize joint efforts toward conserving the Amu Darya River basin ecosystems. This includes the zones of flow formation and dispersion.

Currently, under the overall coordination of SIC ICWC, an expert group is conducting research under “Joint work to preserve ecosystems of the Amu Darya River Basin, including zones of flow formation and dispersion.”

The work plan for this research area includes the second meeting of the expert group in the second quarter of 2025.

The second meeting took place on May 28 in Dushanbe. It was attended by national experts from the Republic of Tajikistan (A. Gulakhmadov, R. Davlatov, F. Karieva), Turkmenistan (G. Nurmukhamedova), Republic of Uzbekistan (T. Khalikov), mass media (N. Shulepina), experts from SIC ICWC (D. Ziganshina and Z. Yarullina), and representatives of the Institute of Water Problems, Hydropower and Ecology of the National Academy of Sciences of Tajikistan.

Objectives of the second meeting:

1. Review results of assessment of the current environmental status of the Amu Darya River basin and its key water-dependent ecosystems presented by experts from Tajikistan, Turkmenistan, and Uzbekistan.

2. Review results of the analysis of legal, institutional, and methodological aspects related to the basin.

3. Examine the current conditions of water management in the Amu Darya River basin.

4. Review the analysis of available satellite data.

5. Review the draft regional report;

6. Discuss proposed recommendations and efforts to improve the water-ecosystem nexus.

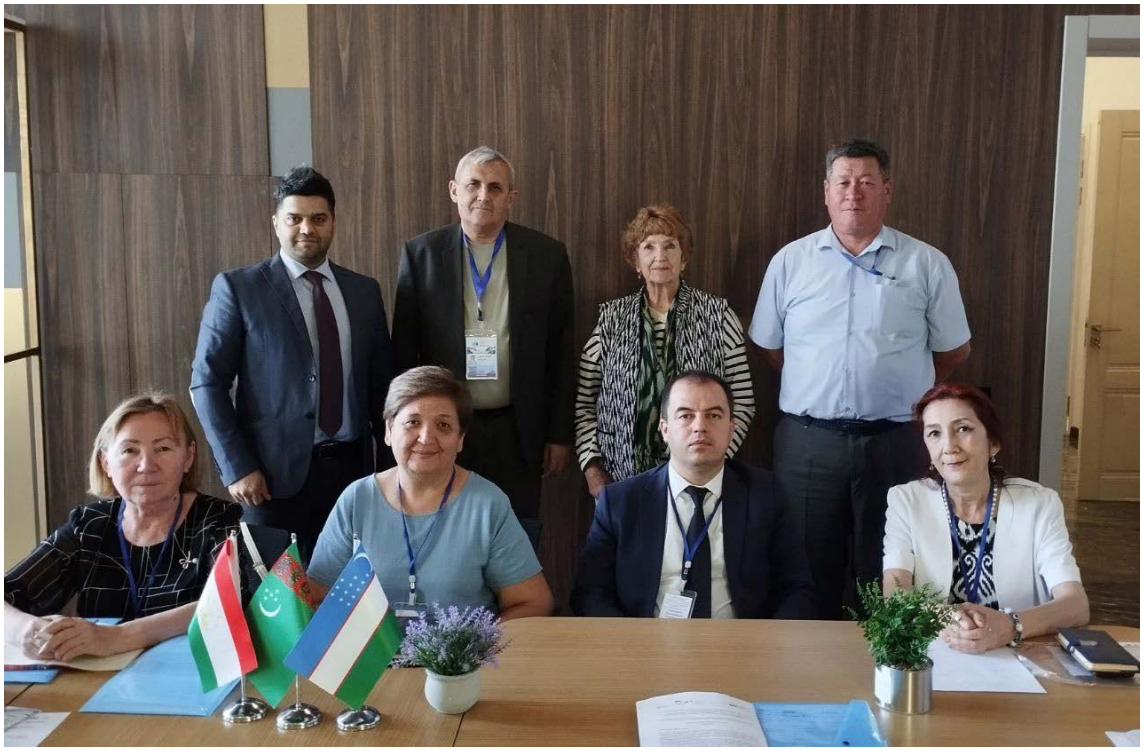
7. Agree on a work plan for the period from June to September 2025.

8. Take part in the forum “Strengthening Transboundary Cooperation for Water Security and Climate Resilience in Glacier-Dependent Basins of Central Asia” as part of the High-Level International Conference on Glaciers’ Preservation.

The participants were presented video featuring general scenes of the Fedchenko Glacier and the Tiger Gorge National Reserve in Tajikistan. After the screening, they discussed the possibility of producing a film as part of the project.

National experts presented results of the assessment of the current environmental status of the Amu Darya River basin and its key water-dependent ecosystems. Mrs. Z. Yarullina delivered a summary regional report.

The participants then discussed recommendations and efforts to improve the water-ecosystem nexus and agreed on the work plan for June to September 2025.



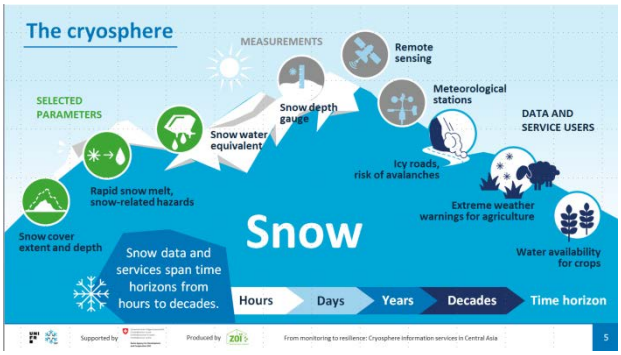
*Expert group*

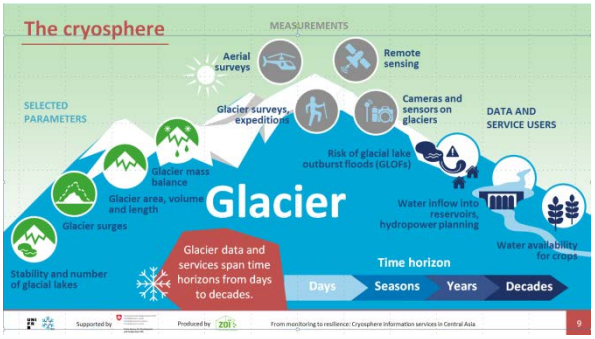
## Stakeholder Workshop on Using Cryospheric Data to Enhance Climate Resilience and Water Security in Central Asia

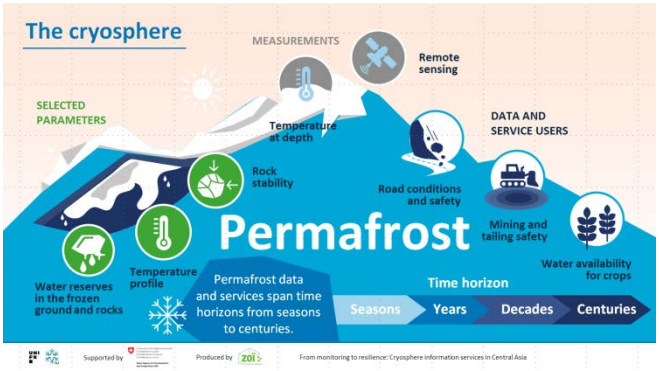
A stakeholder workshop focused on the use of cryospheric data to enhance climate resilience and water security in Central Asia was held in Dushanbe on 28 May 2025. The event was organized under the Cryospheric Observation and Modelling for Improved Adaptation in Central Asia (CROMO-ADAPT) project, co-funded by the Swiss Agency for Development and Cooperation (SDC) and implemented by the University of Fribourg and the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL/SLF).

The workshop, which was held as part of the International Conference on Glacier Conservation, was organized by SIC ICWC. It brought together representatives from various Tajikistani agencies and organizations, as well as experts from the Central-Asian Institute for Applied Geosciences (CAIAG), the Regional Mountain Centre of Central Asia (RMCCA) and the Laboratory of High Mountain Geocryology of the Central Asian Regional Glaciological Centre (Category 2, under the auspices of UNESCO).

Experts from the University of Fribourg (Switzerland) presented findings from their research on the current and projected state of snow cover, glaciers, and permafrost in Central Asia. They also introduced two key tools developed under the CROMO-ADAPT project: snowMapper and glacierMapper, which visualize and provide access to cryospheric data. The snowMapper tool enables users to monitor snow cover area, depth, and the duration of the snow season. It tracks snow accumulation dynamics using satellite observations and modeling. The glacierMapper tool offers visualization of changes in glacier area and volume based on remote sensing data. Both tools are designed to support more accurate runoff forecasting and improved disaster risk management.




In the latter part of the workshop, participants engaged in an interactive discussion focused on their specific needs for cryospheric data and the potential applications of the CROMO-ADAPT tools in their work and research. Participants underscored the critical role of cryospheric data in their operations and emphasized the importance of close collaboration with tool developers to adapt the tools to the specific requirements of hydrometeorological services and other relevant agencies. They also highlighted the need for training qualified personnel capable of interpreting and applying cryospheric data in daily operations. Additionally, participants pointed out the necessity of formalizing the integration of these tools into the forecasting processes of hydrometeorological services.

The workshop established a foundation for continued collaboration on the monitoring and use of cryospheric data to support climate adaptation and resilience efforts in Central Asia.

# Kick-Off Meeting of Project Team on Correction of Hydromodule Zoning in the Syr Darya River Basin

A kick-off meeting of the new project "Correction of hydromodule zoning in the Syr Darya River basin using RS-data and satellite mapping technologies to revisit crop irrigation regimes" was held on 13 June 2025.

The project is implemented under an agreement between the IFAS Executive Committee and the Scientific-Information Center of ICWC, with financial support from the French Development Agency (AFD).

The main project objective is to correct the boundaries of hydromodule zones (HMZ) and draft recommendations on irrigation norms for main crops. This will be achieved using remote sensing technologies (RS) and geographic information system (GIS). In particular, the project involves the analysis of satellite, soil-hydrological and climate data, the development of a comprehensive database, water balance modeling, and the generation of detailed electronic maps.

The primary purpose of the first meeting was to introduce the project team, discuss project aims and objectives in general and for 2025. The event brought together representatives of SIC ICWC, Ministry of Agriculture of the Republic of Uzbekistan, Space Research and Technology Agency (Uzbekosmos), International Water Management Institute (IWMI), Research Institute of Irrigation and Water Problems, and Basin Irrigation System Authorities of Andijan, Fergana, and Namangan provinces.

The participants also reviewed existing developments in hydromodule zoning, identified key priority tasks, and outlined next steps for implementation. The discussion took place in a constructive atmosphere, laying a solid foundation for successful collaboration and effective implementation.

**Editorial office:**

SIC ICWC Karasu-4, B 11-A, Tashkent 100 187, Republic of Uzbekistan

**sic.icwc-aral.uz**