

“Promoting regional water sector dialogue and cooperation in Central Asia through knowledge networking, partnerships and education”



A virtual international conference **“Promoting regional water sector dialogue and cooperation in Central Asia through knowledge networking, partnerships and education”** took place on March 3-4, 2021. It was organized in cooperation with national and regional universities from Central Asian countries, international development partners, including the European Union (EU), the United States Agency for International Development (USAID), the Swiss Agency for Development Cooperation (SDC), UNESCO and others. Over 80 participants from Central Asian universities, research institutions, academia, think-tanks, water sector practitioners, young professionals and international development organizations took part in two days’ online discussions.

Organized by the Central Asian Knowledge Network (CA KN) project, the conference discussed challenges and opportunities faced by researchers and practitioners in Central Asia when it comes to knowledge sharing and cross-border partnerships on water issues. It also marked a key stage in the final year of the project. Established in 2012 under the World Bank’s Central Asian Water-Energy program, the Central Asian Knowledge Network brought together over 300 professionals with experience in water resource management across academia, and public and private sectors in Central Asia¹.

¹ The Central Asian Knowledge Network is funded by the Central Asia Water and Energy Program (CAWEP), which is a multi-donor partnership between the World Bank, the European Union, Switzerland (through SECO) and the United Kingdom (through FCDO). CAWEP promotes water and energy security by strengthening capacities at the national level, as well as facilitating dialogue at the regional level on water and energy cooperation. Link to CAWEP: <https://www.worldbank.org/en/region/eca/brief/cawep>

The conference convened on a virtual platform a broad group of water sector stakeholders to:

- share the results of recent CA KN activities,
- hear from international partners and CA regional representatives about their initiatives in water sector capacity building and in promoting national and regional dialogue on most acute water sector development issues,
- bring in international and regional practice and experience in teaching water engineering disciplines with the focus on linking education, research and practice,
- discuss innovative learning modalities, including online and blended education programs.

March 3, 2021

The first day of the conference was devoted to presenting and discussing coordination and cooperation among various regional networking initiatives which promote regional capacity strengthening in water sector and people-to-people dialogue.

The introductory session **“Many hands make light work” - capacity development, networking and building partnerships programs and initiatives in CA** embraced welcoming remarks from development partners (the European Union Delegation to Kazakhstan, the Swiss State Secretariat for Economic Affairs (SECO), the Foreign, Commonwealth & Development Office (FCDO) Asia Regional Team) and discussion of the on-going and new capacity building programs and projects for water in CA, regional cooperation among universities and curricula unification and gender aspects in water sector and youth support activities.

Within the **first session “Overview of regional partnerships in water sector and major international capacity building initiatives”** presenters from the development organizations shared the gained experience, approaches, capacity building issues and their views on promoting and strengthening regional cooperation within development institutions.

- **Julia Komagaeva** - [CAWEP CA Knowledge Network – how to eat an elephant: overview of approaches and activities.](#)

Mrs. Julia Komagaeva is Coordinator of the Central Asia Knowledge Network - the integrated knowledge and capacity building program under the Central Asia Water and Energy Program (CAWEP) at the World Bank.



- **Robert Brudzynski** - [EU - overview of the EU programs and projects in CA countries](#)

Mr. Robert Brudzynski is a project manager in the Delegation of the European Union to Kazakhstan. Prior to the current position he worked as a project manager in the Delegations of the EU to Kyrgyzstan and Tajikistan.

- **Stephanie Piers de Raveschoot** – [SDC - overview of the SDC water sector capacity building under the Blue Peace Central Asia initiative.](#)

Mrs. Piers de Raveschoot is a Water Programme Manager in the Division Global Programme Water GPW within the Swiss Agency for Development and Cooperation (SDC) since 2017. Prior to the current position she worked as a Programme Officer for Uzbekistan in SDC, environment and civil engineer and project engineer in Sd ingenierie Neuchatel and as a WASH programme manager at Solidarites International.



- **Kristine Tovmasyan** – [UNESCO - working in the area of science, education and capacity building on water in CA region.](#)

Mrs. Kristine Tovmasyan is leading the UNESCO Natural Sciences unit in Central Asia sub-region at UNESCO office in Almaty, Kazakhstan. Prior to joining Almaty, for nine years Kristine worked on disaster risk reduction, notably from geohazards, in Natural Science Sector, UNESCO Headquarters in Paris.

- **Richard Volk** – [USAID – new Regional Water and Vulnerable Environment \(WAVE\) project overview.](#)

Mr. Richard Volk is a seasoned leader of natural resources management, water security, coastal/fisheries, and resilience work with more than 30 years of international development experience. He works more than 20 years at USAID where he provided worldwide technical and managerial support as a senior technical advisor to the Agency's Water Office.



Second session “Networking platforms and communities of practice as instruments enabling people-to-people dialogue, cross-country collaboration and joint action” comprised interventions on the activities of the regional knowledge platforms and initiatives that raise the awareness of water-related issues among the CA population, especially youth.



- **Saltanat Zhakenova** – [CAREC – Partnership with the WB CA KN around the Academic Network and student competitions – how effective partnerships yield long lasting results.](#)

Mrs. Saltanat Zhakenova works as a Specialist on Climate Change of the WB - funded project "Climate Adaptation and Mitigation Program for Aral Sea basin" (CAMP4ASB) and provides thematic and analytical support for implementation of project activities on national and regional levels.

- **Shohida Tulieva** - [The Basin Women's Forum as a platform for representing the voice of women in the IWRM process at the Tajik part of Syrdarya river basin](#)

Ms. Shokhida Tulieva is a National Coordinator for “Gender and Social Equality” in the National project “Water Resources Management in Tajikistan”, which aims to support the “Tajikistan Water Sector Reform Program for 2016-2025”, HELVETAS Swiss Intercooperation in Tajikistan. Ms. Tulieva is the President of the Association "Woman and Water" of CA and Afghanistan with the aim of developing networking and increasing the potential of women specialists in the water sector. Ms. Tulieva, contributed to the development of social, gender issues in water resources management, taking into account the principles of Integrated Water Resources Management, focusing on the development of the "Bottom-Up" approach with 14 experience in CA.



- **Lyazzat Syrlybayeva, Cholpon Aitakhunova** - [CAY4Water Network overview of activities.](#)

Ms. Lyazzat Syrlybayeva is engaged in environmental awareness-raising – particularly co-leading the “Central Asia Youth for Water” (CAY4W) network – focusing on youth empowerment in the water and environmental

sector in the Central Asian region and beyond. **Ms. Cholpon Aitakhunova** is a regional co-coordinator of the “Central Asia Youth for Water” (CAY4W) network.

- **Alisher Mamadzhonov** - [EU Water Initiative National Policy Dialogues on IWRM in Central Asia as intersectoral multistakeholder platforms to drive water reforms: lessons learned from more than 10 years of operation and future prospects.](#)

Mr. Alisher Mamadzhonov works in the secretariat of the UN Economic Commission for Europe Convention on the Protection and Use of Transboundary Watercourses and International Lakes, as a Regional Manager of the National Policy Dialogues on Integrated Water Resources Management programme in the countries of Eastern Europe, the Caucasus and Central Asia. Previously he had also served in the secretariats of the Protocol on Water and Health and the Convention on Long-range transboundary air pollution.





- **Richard Burger** – [EU-Central Asia Network on Water Science and Technology \(Central Asian Water Regional Science Diplomacy: A Stakeholders' Platform\)](#).

Mr. Richard Burger is Policy Officer for International Cooperation in the European Commission's Directorate-General for Research & Innovation. Prior to this position he was Head of the "Science & Technology and Other EU Policies" Section of the Delegation of the European Union to the Russian Federation.

March 4, 2021

In the second day of the conference participants discussed viable approaches to linking education, research and practice in high school curricula, international partnerships between universities, youth research opportunities based on the existing best international and regional CA practices, as well as new learning modalities, including online learning and joint education programs.

"Panel Discussion on Demand and Supply in Water Education in Central Asia" touched upon the students' engagement problems and the lack of young qualified specialists in the CA national water sector industries. Representatives of the CA countries, key research institutions and universities presented their accumulated experience in attracting students to the water-related studies and proposed ways of increasing the number of scientific cadres in CA.

- **Anatoly Ryabtsev** – [What type of modern young water professionals in required by the water sector – practical insight.](#)

Mr. Anatoly Ryabtsev is a PhD in Technical Sciences and Economic Sciences, General Director of "Kazgiprovodkhoz" Project Design Institute LLP, and Director of the International Water Center (Water Hub) at the Kazakh National Agrarian Research University. From 2002 to 2009 Mr. Ryabtsev was a Chairman of the Committee on Water Resources of the Ministry of Agriculture of the Republic of Kazakhstan.



- **Bota Sharipova** – [Overview of supply and demand in water education in CA countries - the SDC study results.](#)

Ms. Bota Sharipova is involved in a wide range of the water-related transboundary projects in the Aral Sea Basin. In 2019-2021 she worked as a Consultant for youth mobilization in CA for the International Secretariat for Water and in 2020-2021 as a Consultant on water education in CA for the SDC.

- **Saghit Ibatullin** – The importance of official ministerial (sectoral) request (expression of demand) for young water specialists in the context of a COVID-19 crisis.

Mr. Saghit Ibatullin is Doctor of Technical Sciences, Professor in Taraz State University in Kazakhstan, Head of the CA Regional Academic Expert Group under the CAWEP CA KN. During his career Mr. Ibatullin worked as the Professor and Chairman of the Scientific Department, Vice Rector of Taraz State University (1979-2004), Director of the Kazakh Research Institute of Water Management in Taraz (2004-2008). From 2008 to 2013 he was the Chairman of the Executive Committee of the International Fund for Saving the Aral Sea.



- **Mrs. Elena Drugaleva** – [Experience in linking education and applied research in Kyrgyz Republic.](#)



Mrs. Elena Drugaleva is DS, Senior Research Fellow, Candidate of Technical Sciences, Member of the CA Regional Academic Expert Group, Kyrgyzstan. She worked as the Head of the department of the Amelioration and Water Resource Management at the Kyrgyz National Agrarian University named after K.I. Skryabin (KNAU) from 2006 to 2020.

- **Batyr Mamedov** – [Lessons of experience in conducting applied research on the example of the takyr restoration project in Turkmenistan – how to better structure educational process, development of analytical skills and scientific work skills among students.](#)

Dr. Batyr Mamedov is a Head of the Secretariat of the Interstate Commission for Sustainable Development of the International Fund for Saving the Aral Sea (ICSD IFAS).

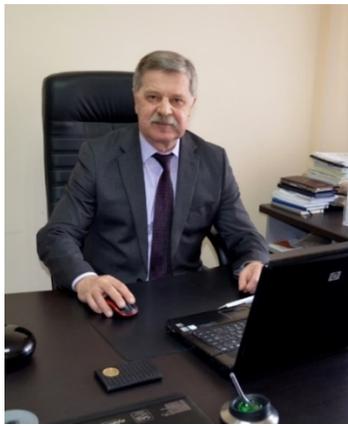


- **Dilshod Umarov** – [Issues of preparation and provision of scientific cadres to research and applied structures of Tajikistan. Organizing and conducting training courses and seminars to improve the skills of all categories of water users, as well as developing the skills of water sector specialists. Implementation of the principles of integrated water resources management, development of economic mechanisms for water use, as well as professional development of water sector employees.](#)

Mr. Dilshod Umarov is a General Director of “Research institute of water engineering and amelioration of Tajikistan” (TajikNIIGiM), Ministry of Energy and Water Resources of the Republic of Tajikistan.

- **Abdulkhakim Salokhiddinov** – [Ensuring integration of education, science and practice in Uzbekistan water sector education cycle based on the experience of TIAME.](#)

Dr. Abdulkhakim Salokhiddinov is Professor, Doctor of Technical Sciences, Vice-Rector for International Cooperation at the Tashkent institute of irrigation and agricultural mechanization engineers (TIAME), Uzbekistan.



- **Valery Syundyukov** – [Assessing the demand for specialists in the Kazakhstan's water supply and sanitation sector - results of the study of the Association of Water Supply and Sanitation Enterprises of the Republic of Kazakhstan "Kazakhstan Su Arnasy".](#)

Mr. Valery Syundyukov is a President of the Association of Water Supply and Sanitation Enterprises of the Republic of Kazakhstan "Kazakhstan Su Arnasy".

The final conference session “Pushing the frontiers and searching for innovative approaches to education, water and climate change challenges” was devoted to the new approaches to teaching process during the pandemic-imposed lockdown, international experience with online training programs and impacts of the international projects on national educational programs.



- **Vitaly Nagornov** – [WB CA KN – organizing virtual training seminars on approaches to design and teaching online courses.](#)

Mr. Vitaly Nagornov is Senior Researcher at the Moscow State Institute of International Relations (MGIMO) and associate editor of the Central Asian Journal of Water Research (CAJWR). He has 18 years of research experience in the field of international relations, economic development, online ranking.

- **Dadakhon Khodzhaev** – [Reflections from the TIAME experience.](#)

Mr. Dadakhon Khodzhaev is associate professor, Head of the educational and methodological department of the Tashkent institute of irrigation and agricultural mechanization engineers (TIAME), Uzbekistan.





- **Alim Pulatov** – [CA country experience in delivery of joint programs and dual diploma programs with international partners. Experience in organizing and conducting programs at TIAME.](#)

Mr. Alim Pulatov is Professor, Head of EcoGIS Center at Tashkent institute of irrigation and agricultural mechanization engineers (TIAME), Uzbekistan, Doctor of Philosophy - PhD Environmental protection, conservation agriculture, remote sensing and GIS.

- **Zafar Makhmudov** - [Central Asia Climate Information Platform \(CACIP\) to access, analyze, and visualize public-domain data.](#)

Mr. Zafar Makhmudov is the Executive Director of the Regional Environmental Centre for Central Asia (CAREC). Prior to joining CAREC, Mr. Makhmudov served as the Head of the Project Implementation Unit at the Committee for Environment Protection under the Government of the Republic of Tajikistan, where he coordinated projects on natural resource management.

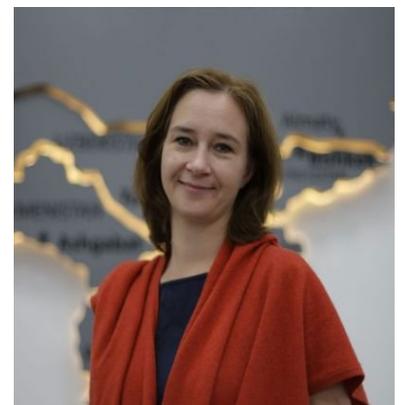


- **Maryna Peter** – [Teaching online the WASH course at the GKU.](#)

Dr. Maryna Peter is a research scientist at the FHNW - University of Applied Sciences and Arts Northwestern Switzerland, School of Life Sciences. She has managed projects in Water, Sanitation and Hygiene in low and middle-income countries and humanitarian emergencies at the Swiss Federal Institute of Aquatic Science and Technologies Eawag at the departments of Environmental Engineering and Sanitation, Water and Solid Waste for Development.

- **Barbara Janusz-Pawletta** – [UNESCO - facilitating the exchange of expertise and knowledge within the region \(and with outside\) through the UNITWIN -university twinning and networking-program. Example of the KGU UNESCO Chair.](#)

Dr. Barbara Janusz-Pawletta is a Vice-Rector on International Cooperation at the German-Kazakh University (DKU) and the Editor-in-Chief of the Central Asian Journal of Water Research (CAJWR). She has a membership at the Technical Committee of the Global Water Partnership (GWP) and at International Law Association within the Committee "Role of International Law in Sustainable Natural Resource Management for Development".



- **Nurgazy Mamataliev** – [Impacts of international projects on national educational programs - the example of the project “Integrated water resources management in the Fergana Valley” \(Kyrgyzstan, Tajikistan, Uzbekistan\).](#)

Mr. Nurgazy Mamataliev is a chief engineer at the OJSC “Kyrgyzsuudolboor”. He was a country coordinator in the project “Integrated water resources management in the Fergana Valley” representing Kyrgyzstan.

Challenges in the CA water sectors and possible solutions for improvement

Participants exchanged views and discussed the speakers’ presentations and session topics in the live chat. The key points from discussions and useful links are summarized below:

- The Blue Peace program (by the Swiss Agency for Development and Cooperation (SDC) coordinates its work with the CAWEP through a regional water advisor who follows closely both activities and can make sure of the most relevant synergies.
- Data availability is still a challenge in the region:
 - Developing links between the governmental organizations would be a very important and much required step. Research projects produce a wealth of data but transforming it to impacts and developing pathways to impacts is very challenging and needs further discussion;
 - Despite all research initiatives present in the region, young researchers still refer to a challenge of data availability;
 - SDC’s partner - Hydrosolutions project (by China) - is developing the new module on data modeling. The training for Central Asia has been delivered as a spin-off of the Chinese project, in September 2019: <https://www.hydrosolutions.ch/news/innovations-in-groundwater-management-workshop-in-tashkent>;
 - CARAWAN Network (Central Asia Research and Adaptation Water Network, run by the University of Reading, <https://climateandglaciers.org/central-asia-research-and-adaptation-water-network-carawan/>) looks at water quality in four CA countries, trained local scientists in water quality analysis, who should be able to disseminate the skills. Data should be in the public domain in autumn 2021.
- Trainings on academic writing are held periodically in the region, however, those courses should be included in the mandatory learning programs. Training courses on academic writing delivered under the CA KN in Central counties Asian in 2019 were very helpful;
- The YouTube channel Land and Water CA is a partner of the Syr-Darya Basin Women Forum of Tajikistan: <https://www.youtube.com/watch?v=tS2JvF-H6VE>;
- Central Asia & Afghanistan Women & Water Association: <http://caawwa.org/>;
- Some useful links shared by the UNECE:
 - UN-Water SDG 6 Summary Progress Update: <https://www.unwater.org/online-event-to-launch-the-un-water-sdg-6-summary-progress-update/>;
<https://docs.google.com/forms/d/e/1FAIpQLSdKIZ1WcvGJpC0ydpqDsZTMBbQ98B1rV0SYLexqVFATeNFC6g/viewform>;
 - Governance for Transboundary Freshwater Security – a Massive Open Online Course (MOOC): <https://www.gwp.org/en/learn/capacity-building/governance-for-transboundary-freshwater-security--a-massive-open-online-course-mooc/>;

- There is no learning-by-doing approach, which causes a gap between science, practice and learning. Lack of proficiency in English doesn't allow the future specialists to be aware of the latest achievements in the world.
- It is necessary to restore a 'request' from production for water specialists in Central Asia, which corresponds not only to modern requirements, but also to international practice, when students start working in production in the 2nd year of training.
- The CA KN is currently testing the Open edX platform and delivering a pilot training course on development of online courses for teachers of water resources and energy in Central Asia: <http://cakn.online/online-academy/>.

Moving further

After the conference the organizers reached out to the participants with the short survey. Following were the questions:

- 1. In your opinion, what is the best way to coordinate regional programs for the knowledge exchange in the field of water resources in Central Asia?**
- 2. What would you suggest to further develop the CA KN knowledge platform? Where do you see its pros and cons?**
- 3. What are the hot topics related to the water sector in the region that are not covered in online platforms and communities of practice and need careful consideration?**
- 4. In your opinion, how we can improve the human resources capacity in the water sector of Central Asia?**
- 5. Do you deal with a lack of information, seminars, conferences, knowledge exchange while doing your work? What information would you like to receive?**

For the regional programs' knowledge exchange coordination modalities the respondents proposed to appoint local focal points and to establish a joint coordination center, to organize shared databases, joint projects, and conferences, including – as was proposed by one respondent - inviting to cooperate organizations and specialists from the Xinjiang Autonomous Region of the People's Republic of China as the best practice of effective water use.

The respondents also provided recommendations for the improvement of the CA KN knowledge platform pointing that (i) it is important to develop online training courses, lectures, and advertising among young water professionals; (ii) it is necessary to start active work of the network by adding new materials and discussions, (iii) foster exchange of teachers and students, lectures on relevant topics, advanced training courses for teachers. Among advantages of the CA KN the presence of a structured web page was highlighted, whereas main disadvantages of the platform are considered to be the lack of extensive interesting and relevant analytical and training material, experts discussions and level of popularization.

Some general considerations of respondents included opinions that most of the existing online platforms and CoPs do not sufficiently cover crucial water-related issues: cross-border cooperation and water security; urban infrastructure, water treatment, practical experience in the transfer of knowledge about new technologies, water pollution; joint water management; underground water.

According to the respondents, for the human resources capacity improvement in the water sector, the universities and related state and non-state actors should:

- offer jobs, attach the strongest candidates to the work of an expert in the industry;

- improve the quality of education, attracting students to practice, including the financial attractiveness of the industry for young people;
- pay more attention to the transfer of modern water use experience;
- learn through the training of undergraduates, joint work on projects and organize joint schools for students

Common opinion was that water specialists in central Asia lack **the united source virtual platform** where it would be possible to get all the relevant information and best practices in water use with reliable statistics. A persistent unresolved issue remains **the open access to data**, e.g. surface and underground water levels, availability of GIS maps (shape file), reports on detailed water use, including industry, agriculture and drinking water supply, data on the use of groundwater for irrigation, actual meteorological data hourly, daily, annual (precipitation, evaporation).

