



Stocktaking review and mapping of water-related knowledge and capacity building initiatives by international partners in Central Asian countries

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List of Acronyms

ASBP - Aral Sea Basin Program
AUCA - American University of Central Asia
CA – Central Asia
CA KN - Central Asia Knowledge Network
CADI - Central Asian Desert Initiative
CAJWR - Central Asian Journal of Water Research
CALP - Central-Asian Leadership Programme on Environment for Sustainable Development
CALPESD - Central Asian Leadership Programme on Environment for Sustainable Development
CAR@WAN - Central Asian Regional Water Network
CAREC - The Regional Environmental Centre for Central Asia
CAS - Center for Afghanistan Studies
CAWa - Regional Research Network “Water in Central Asia”
CAWECOOP - Central Asia Water Nexus Cooperation
CAWEP - Central Asia Water and Energy Program
CAYFWATER - Central Asia Youth Forum on Water
CREA - The Council for Research and Economics in Agriculture
CSD Center - The Center "Cooperation for sustainable development"
DAAD - German Academic Exchange Service (Deutscher Akademischer Austauschdienst)
DFID – United Kingdom Department for International Development
EECCA NWO - Eastern Europe, the Caucasus and Central Asia Network of Water (Basin) Organizations
EKSTU - D. Serikbayev East Kazakhstan State Technical University
ELP - Ecological Leadership Program
EM - Environmental Management System
ENU - Eurasian National University
EU - European Union
EUWI - European Union Water Initiative
FAO - The Food and Agriculture Organization of the United Nations
GIS - Geographic information system
GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH / German Society for International Cooperation
HEIs – Higher Education Institutions
IAMO - Leibniz Institute of Agricultural Development in Transition Economies
ICWC - Interstate Coordination Water Commission of the Central Asia
INBO - International Network of Basin Organizations
IUCLAND - International University Cooperation on Land Protection in European-Asiatic Countries
IUCN - International Union for Conservation of Nature and Natural Resources
IWMI - International Water Management Institute
IWRM - Integrated Water Resources Management
KSTU - Kyrgyz state technical university named after Iskhaak Razzakov
NPDs - National Policy Dialogues
NWO EECCA - Regional Network of Water (Basin) Organizations from Eastern Europe, Caucasus and Central Asia

OSCE - The Organization for Security and Cooperation in Europe
OshTU - Osh Technological University named after the academician M. M. Adyshev
REC Caucasus - Regional Environmental Centre for the Caucasus
RRC.AP - The Regional Resource Centre for Asia and the Pacific
SDGs - Sustainable Development Goals
SECO - State Secretariat for Economic Affairs
SIC ICWC - Scientific-Information Center of the Interstate Coordination Water Commission of the Central Asia
SKSU - M. Auezov South Kazakhstan State University
SRI – Science and Research Institutions
TIIAME - Tashkent Institute of Irrigation and Agricultural Mechanization Engineers
UCA - University of Central Asia
UMB - Norwegian University of Life Sciences
UNECE - United Nations Economic Commission for Europe
UNEP - United Nations Environment Programme
UNESCO - The United Nations Educational, Scientific and Cultural Organization
UNESCO IHP - UNESCO International Hydrological Programme
UNO - The University of Nebraska at Omaha
UNOPS - United Nation’s Office of Project Services
USAID - United States Agency for International Development
USWDP - University Support and Workforce Development Program
WB - The World Bank
WECOOP – The Regional Coordination and Support for the EU-Central Asia Enhanced Regional Cooperation on Environment, Climate Change and Water project
WEF Nexus - Water, Energy & Food Security Nexus
WFD - Water Framework Directive
WHO - The World Health Organization
WMBOCA - Water Management and Basin Organisations in Central Asia
WSS – Water Supply and Sanitation

1. Introduction

The United Nations General Assembly has proclaimed the decade 2018-2028 as the International Decade for Action “Water for Sustainable Development”. It started on World Water Day, 22 March 2018, and will end ten years later, on World Water Day, 22 March 2028. The draft resolution emphasizes that sustainable development and integrated water resources management are crucial to reach social, economic and environmental goals. It stresses the importance of implementing such programmes and projects and promoting partnerships as well as the involvement of different stakeholders in order to accomplish the 2030 Agenda for Sustainable Development.¹

The High-Level International Conference on the International Decade for Action “Water for Sustainable Development” took place in Dushanbe, Tajikistan, on 20-21 June 2018, to discuss how to achieve the objectives of the Decade, contained in UN General Assembly Resolution 71/222 of 21 December 2016, in order to support the implementation of the 2030 Agenda for Sustainable Development. Heads of State and Government, ministers and other high-level dignitaries took part in this historical gathering together with representatives of international and regional organizations, local governments, civil society, the private sector and academia.²

In the Final Declaration of the High-Level International Conference on the Decade for Action “Water for Sustainable Development”, the participating representatives of states and organizations, among other, declared to:

- strengthen the capacities, resources and skills, as well as improve knowledge generation and exchange of practices, to support national and local governments in achieving the SDGs, particularly in those countries and for those people furthest behind;
- step up the efforts to develop tools, build institutional and human resources capacity, foster technology exchange, improve data that are appropriately disaggregated, disseminate knowledge, including traditional knowledge, skills and enhanced scientific and technical know-how to better understand the water cycle, contribute to the identification of appropriate solutions, including through South-South and triangular cooperation and improved research, education and training with a local perspective and special attention to children and youth.³

Central Asia is among the most sensitive regions in terms of water resources, which creates many challenges from social, economic and geopolitical perspectives. Its geography and uneven distribution of water resources made the governments of all CA countries have put the issue of access to water and its management at the top of their agendas. Accelerating processes of economic growth and urbanization experienced by CA countries have increased the pressure on water resources. Therefore, local governments urgently need to strengthen their capacities and develop preventive policies that guarantee access to drinking water and sanitation, at the same time, strengthen institutions and grow potential to improve the management of water resources in the region.

¹ UNESCO/ UNESCO in Brazil/ About this Office/ Prizes and Celebrations/ 2018-2028 International Decade for Action, ‘Water for Sustainable Development’: <http://www.unesco.org/new/en/brasil/ia/about-this-office/prizes-and-celebrations/2018-2028-international-decade-for-action-water-for-sustainable-development/>

² High-Level International Conference on the International Decade for Action “Water for Sustainable Development”, 2018-2028. FINAL DECLARATION: <https://wsdconf2018.org/wp-content/uploads/2017/05/2018-06-21-Final-Declaration-clean.pdf>

³ High-Level International Conference on the International Decade for Action “Water for Sustainable Development”, 2018-2028. FINAL DECLARATION: <https://wsdconf2018.org/wp-content/uploads/2017/05/2018-06-21-Final-Declaration-clean.pdf>

“The review of the potential of water education in Kazakhstan, Kyrgyzstan and Tajikistan” supported by the UNESCO Almaty Cluster Office for Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan outlined that the existing situation, among other reasons, is connected with the imperfection of the system of education and training of senior and mid-level managers in the water sector. Also, it stated that representatives of the water industry noted the unsatisfactory level of knowledge and capacity of young water professionals that had started to work in recent years. Still, after seven years of the review publishing, the water industry of CA countries still needs specialists capable of conducting design, construction and operational work on water bodies and hydraulic structures. In addition, future professionals need to master knowledge, skills and abilities to make and implement management decisions, based on the principles of integrated approach.⁴

The Central Asia Knowledge Network (CA KN) started its activities in 2014 as part of the Central Asia Water and Energy Program (CAWEP) – the World Bank (WB) regional programmatic technical assistance project. The CA KN serves as a platform for cooperation and knowledge exchange among Water Resources Management practitioners, academics and young professionals from five Central Asia countries plus Afghanistan. The development objective of the CA KN has been to enhance regional knowledge and professional capacity and to foster cooperation, cross-country dialogue and experience exchange among local and regional institutions and practitioners in the areas of water resource management, energy and climate change in the Central Asia region and Afghanistan. The CA KN regional and country specific activities during 2014-2017 were highly regarded by country clients and the academic community. The demand has been expressed to further strengthen country ownership on previous achievements through continuation and expansion of the CA KN initiatives, specifically, to support:

- further nourishing existing Communities of Practice, local youth and academic initiatives,
- creating new state-of-art curricula in CA universities,
- strengthening regional research potential to ensure sustainability and scalability of project results.

The water-related agenda in Central Asian countries – due to its vital importance for the region – is the focus of international development assistance programs of the plethora of national and international donors, and research and capacity building organizations. There are numerous global and regional water related networks and partnerships which provide knowledge and capacity building activities to support building professional, academic and research potential of the next generation of water professionals in Central Asian countries. In its previous CAWEP phases, the CA KN program operated in close coordination and cooperation with key national and international partners, like Central Asian Regional Environmental Center (CAREC), the Kazakh-German University (KGU), UNESCO Regional Office, OSCE, GIZ, SDC, and others.

Embarking on the next phase of the CA KN program implementation calls for a closer coordination of efforts, and therefore, a need to conduct a stocktaking review and country mapping of the ongoing knowledge, learning and capacity-building activities currently implemented (or recently completed) by the international partners and organizations operating in the water management sector in Central Asia.

Therefore, this report summarizes information on key activities by the international partners and organizations operating in the water management sector in Central Asia aimed to:

⁴ Обзор потенциала образования в области водных ресурсов в Казахстане, Кыргызстане и Таджикистане: http://old.unesco.kz/science/2011/Status%20of%20water%20education%20in%20Central%20Asia_ru.pdf

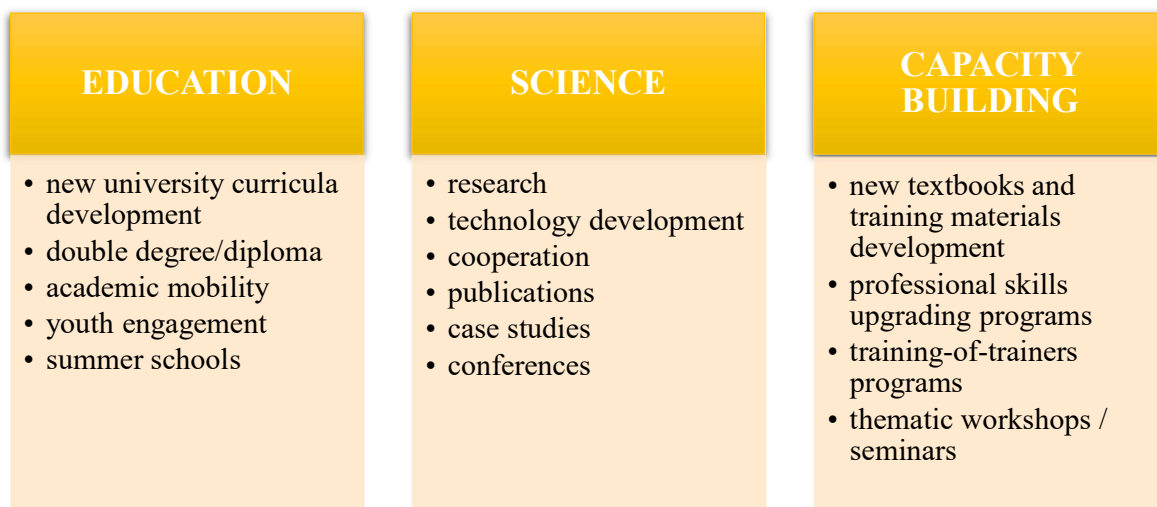
- support to new university curricula development and delivery,
- train-the-trainer programs,
- new textbooks and training materials development,
- national and regional research and academic activities,
- professional skills upgrading programs,
- regional knowledge and information-sharing networks and platforms implemented during the period 2015-2018 by international partners in CA countries.

2. Methodology

The main goal of the project is to conduct a stocktaking review and mapping of water-related knowledge and capacity building initiatives by international partners in Central Asian countries. Therefore, water-related initiatives are outlined within three main dimensions:

- education,
- science,
- capacity building.

To ensure a more structured approach to the research, sub-elements are identified in the abovementioned dimensions:



The methodology for stocktaking is based on two main components:



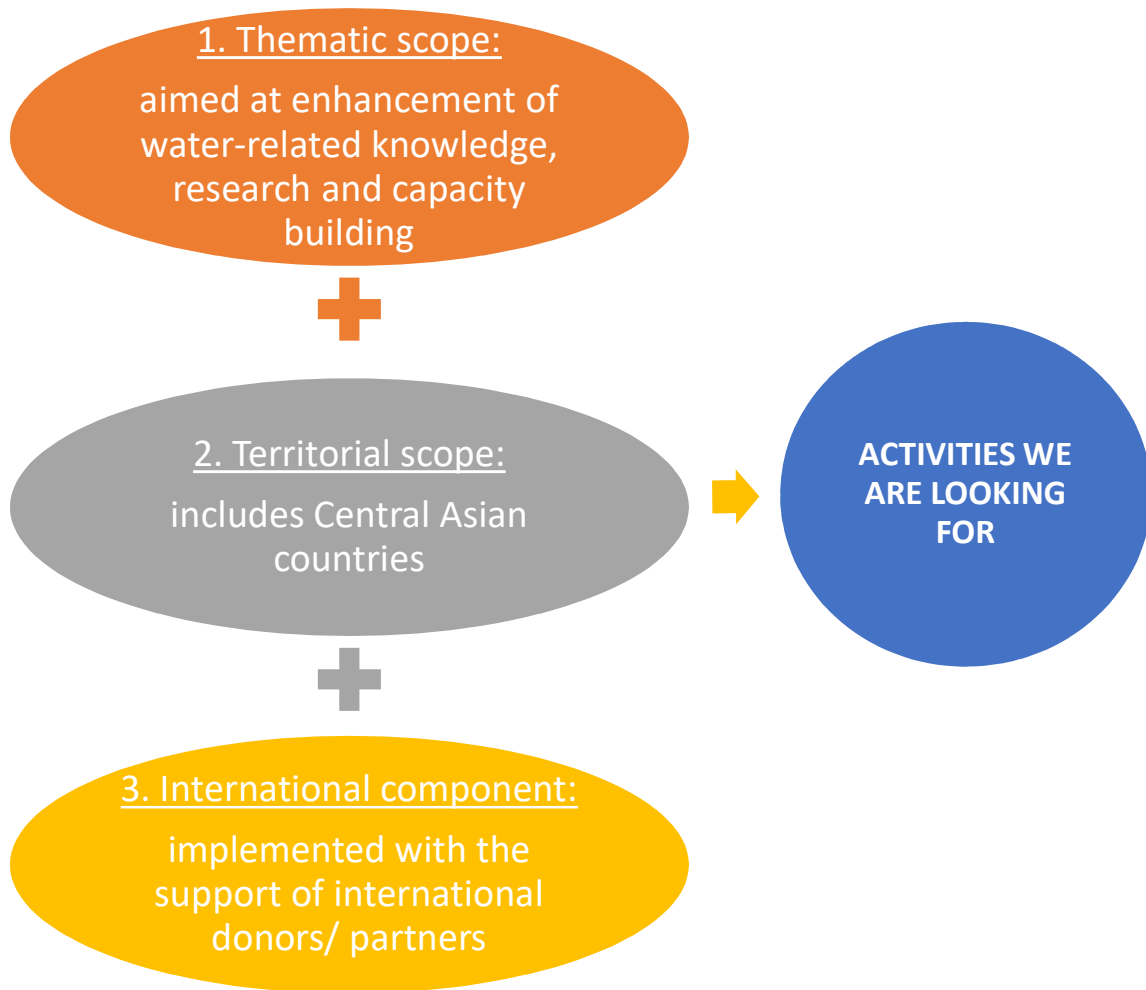
The systematic literature review relies on various sources, namely: internet sites, project materials and reports, books, peer-reviewed journal articles on the subject and others, and examines water-related programs and activities supported by international donors during 2013-2018.

In order to systemize the research, it was decided to start with identifying the key organizations in CA implementing water-related activities within three specified directions. This step helped to outline the following:

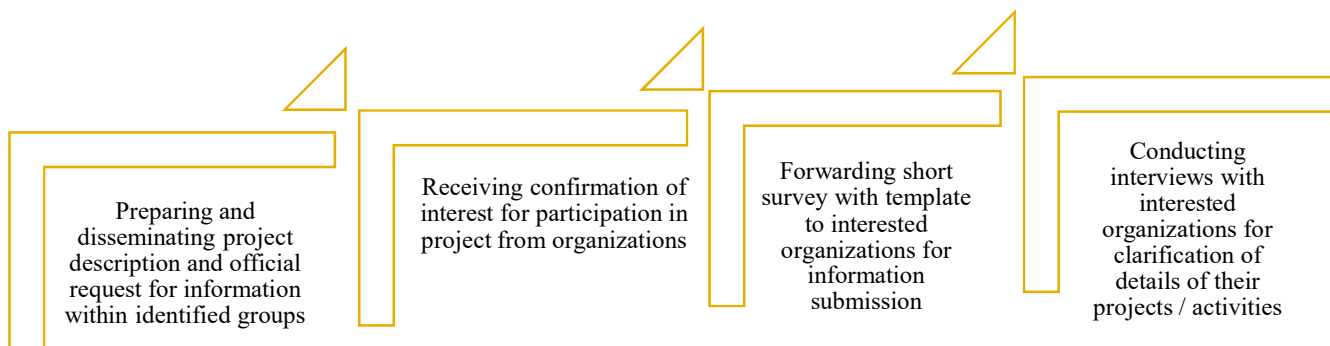
- range of high education institutions (further referred as HEI) in CA countries with academic programs related to water resource management;

- number of scientific-research institutions (further referred as SRI) in CA countries implementing research and development activities related to water resource management;
- number of national and regional organizations/networks implementing capacity building projects for water resources in CA countries;
- international donor organizations supporting water-related programs\projects in CA countries.

The next step was to select the activities that match the project’s goal. The main criteria for selection were:



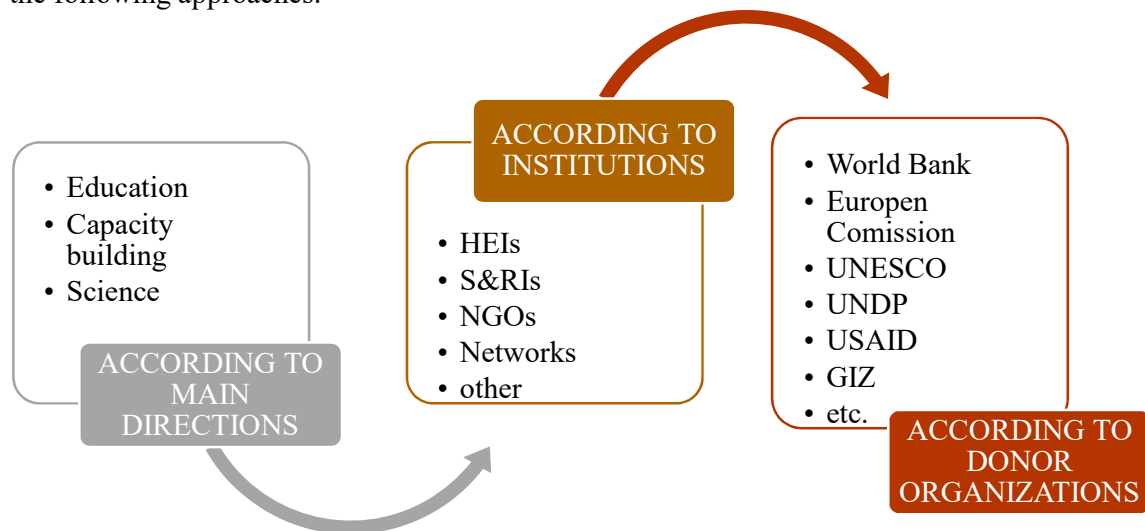
The second component of the methodology included interviews and surveys. This phase involves personal or Skype interviews with organizations involved in capacity building, academic and research in water related matters. Initially, the interviews and surveys were planned to help validating the desk review findings in each country. However, it turned out to be an additional instrument for collecting of data, since some information on activities of CA organizations is hard to obtain from internet resources (due to obsolete data on websites, as well as unavailable Russian or English translation in some cases). Therefore, the process was structured as follows:



Moreover, the review included conducting interviews with international donor organizations upon completion of the desk research summary to ensure all existing activities are identified and included.

The final step of the stocktaking and mapping phase entailed matching identified water-related national, regional and international learning, education and capacity building programs, knowledge and information platforms in water management issues for CA to donors and key players, countries and subject matters.

The process of systematization of the research results consists of transforming the data collected and processed into a coherent outline. The results of the research are systematized according to the following approaches:



3. Main findings

International organizations have supported the implementation of a wide range of activities related to knowledge, learning and capacity building in water-related fields in Central Asia during the past five years (2013-2018). The increasing awareness of and capacity in water-related topics in the region is evidence of progress towards better management of water resources.

However, there are still areas for improvement, mainly:

1. A fragmented or varied thematic focus of internationally supported educational projects - they mainly work on technical issues. Thus, there is a need to strengthen fields related to support of an integrated approach to water management, including economic, social, ecologic and governance aspects of water management. Moreover, it's important to promote modern tools and technologies for water resource management, such as GIS remote sensing. One way of doing this is by introducing new manuals and other publications as reading materials for students and teachers preferably, manuals for academic teaching recognized by universities and the state.
2. Limited promotion of modern teaching methods and approaches such as online academic courses and modules – these methods should be taken into account for future development of water-related education. There are number of water-related courses available worldwide, however, only a limited quantity is specific to the CA region.
3. Increasing support for young professionals. Research has shown that there are only several regional or international programs, like summer schools, aimed at increasing capacity of Master's students or recent graduates in water-related fields in CA. Additional concern is that mainly local participants (from the country where the programs are held) attend the programs that are designed to be regional. This happens because organizations don't have sufficient funds for inviting participants from all CA countries. Therefore, it's important to ensure equal participation of representatives of all CA counties.
4. There are specific requirements in each CA country to conduct trainings aimed at teachers' qualification enhancement. However, there is a lack of specialized academic materials available in national languages, as well as lack of on-line capacity building trainings on integrated approach to water management for teachers. There are very few trainings on-the-ground and they do not extend to all teachers.
5. Little to no integration among educational projects of CA universities in terms of curriculum alignment, joint research, exchange of publications and academic materials. Therefore, it's important to strengthen academic network and promote cooperation between CA universities water-related education.

4. Complex water-related programs in Central Asia

Central Asian Desert Initiative – CADI is a 3 year initiative (2017-2020) aimed at preserving biological diversity and the conservation and sustainable use of ‘cold winter deserts in CA’⁵. The project is part of the International Climate Initiative and the main target countries are Kazakhstan, Turkmenistan and Uzbekistan. CADI is jointly implemented by the University of Greifswald (Germany), the Michael Succow Foundation (Greifswald, Germany), the Food and Agriculture Organization of the United Nations (FAO), Sub-regional Office for Central Asia (Ankara, Turkey), Ministry of Agriculture in Kazakhstan, State Committee of Turkmenistan for Environmental Protection and Land Resources, and State Committee on Forestry of the Republic of Uzbekistan.⁶

The program consists of four packages with the following outputs:

- WP1: Evidence based knowledge on ecosystem services, biodiversity, conservation status and land-use of cold winter deserts is available, applied and disseminated.
- WP2: Multi-stakeholder-based sustainable land management for desert biomes is introduced in the partner countries.
- WP3: Conditions for improved management and establishment of protected areas in the desert biome are created and measures are actively promoted.
- WP4: Key actors in the region develop a joint vision for conservation and sustainable use of temperate deserts in Central Asia, communicate this vision at the national and international level and establish networks.⁷

One of the main results under WP3 was the establishment of a new desert protected area in Atyrau region in Kazakhstan. Further results of different activities are:

- CADI Fellowship Program: Announcement and subsequent selection of three scholarship holders from Uzbekistan, Kazakhstan and Mongolia.
- Start of the scholarship program: 01.10.2017.
- Development of a CADI communication strategy by the MSS and launch of the trilingual CADI project homepage, creation of a project flyer as well as dispatch of a first newsletter.
- FAO kick-off workshop about CADI in November 2017 in Tashkent (Uzbekistan).
- Development of a regional strategy for spatial prioritization of further area nature conservation.
- Development of an exemplary biodiversity monitoring concept for "winter cold desert biomes" in Kazakhstan.⁸

Central Asia Water and Energy Program - CAWEP is a partnership (Trust Fund) between the WB, the European Commission (EC), Switzerland (through SECO), the United Kingdom (through DFID), and the United States (through USAID) which is operated by the WB, and is aimed to strengthen the enabling environment to promote energy and water security at regional level and in the beneficiary countries. It is structured along three pillars: (1) energy security; (2) energy-water linkages; and (3) water security. The program pursued three components since its inception in

⁵ Cold winter deserts – are continental deserts, whose aridity is explained by its distance to oceans or their locality in the rain shadow of larger mountain ridges

⁶ Central Asian Desert Initiative/ Home: <http://cadi.uni-greifswald.de/en/home/>

⁷ Central Asian Desert Initiative/ About CADI/ Work Packages: <http://cadi.uni-greifswald.de/en/about-cadi/work-packages/>

⁸ State of Implementation/results: https://www.international-climate-initiative.com/en/nc/details/project/central-asian-desert-initiative-cadi-conservation-and-adaptive-use-of-winter-cold-deserts-in-central-asia-16_IV_052-486/

2009: (a) supporting investments; (b) institutions, capacity and dialogue; (c) data and diagnostic analyses.⁹

CAWEP promotes water and energy security working at the national scale to strengthen national institutional capacities and sector performance, while at the same time keeping regional cooperation on the dialogue agenda to create an enabling environment for achieving national and regional energy and water security.

As the Program entered its third funding phase (2018-2022), the program added Afghanistan as a sixth direct beneficiary country (together with Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) of CAWEP funds. This formalizes the ongoing practice of Afghanistan's participation in multiple CAWEP activities, in particularly those focused on regional consultations.

Projects/activities implemented:¹⁰

- Workshop and Roadmap on strengthening analysis IWRM
- Implementation of Knowledge Platform
- Assessment of the role of glaciers in stream flow
- CA Water Future Forum & Expo
- CA Climate Knowledge Forums
- CA Hydromet Modernization Project (CAHMP)
- Riparian Dialogue (Rogun Consultations)
- CASA-1000 Dialogue Support
- CAMP4ASB

EU Water Initiative in Eastern Europe, the Caucasus and Central Asia - EUWI EECCA (2008-2016). The project has contributed to the implementation of the EUWI National Policy Dialogues (NPDs) on IWRM and water supply and sanitation in ten EECCA countries (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan, and Ukraine).

Phase I (2008-2012) has supported the achievement of the water-related Millennium Development Goals in the region and the improvement of water supply and sanitation services that were delivered to the population, as well as the management of water resources. Project was jointly implemented by OECD and UNECE.

During phase II (2012-2015) the project was supporting the countries to:

- Develop and implement water strategies and legislation based on IWRM and WFD principles.
- Strengthen inter-sectoral co-operation to improve water and health and implement the UNECE/WHO Protocol on Water and Health.
- Develop national policies for the management of trans-boundary waters in accordance with the UNECE Water Convention and other international environmental instruments.

⁹ The World Bank Group/ Where We Work / Europe and Central Asia/ Central Asia Water and Energy Program: <https://www.worldbank.org/en/region/eca/brief/cawep>

¹⁰ 6th EU – CA High Level Conference on Environment and Water Cooperation/ Christina Leb, World Bank: Central Asia Water and Energy Program (CAWEP) (in English): http://wecoop2.eu/sites/default/files/documents/VI%20EU-CA%20HLC_Jan%202019/11%20-%20Session%20%20Presentation%20%20Christina%20Leb%20ENG.pdf

- Strengthen the use of economic instruments in water policies and facilitate investment in water infrastructures and services.¹¹

Among other results there are:

- Kyrgyzstan: a basin management plan was developed, and a Basin Management Council was established for the Chu River; reform of economic instruments for water management was started.
- Kyrgyzstan: development of investment plan for water supply and sanitation in.
- In August 2012, Turkmenistan acceded to the Water Convention, and in 2013, the inter-ministerial expert group drafted a National Water Code in order to enact necessary legal changes in line with the Water Convention and principles of IWRM.¹²

Promotion dialogue for conflict prevention related to water nexus in Central Asia – CA WECCOOP. The project is implemented by CAREC in five countries of CA Region: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, from December 2015 to August 2017.

Overall objective: To stimulate transboundary trust and high-level, trans-national political involvement in the CA water nexus through the following specific objectives:

- Building national and regional networks around the water nexus through helping the countries to prepare for major water management events;
- Promoting tools contributing to better regional water management, such as remote sensing and modeling;
- Supporting exchange of experience within Central Asia on topics related to water, land use and energy efficiency;
- Providing capacity-building for target groups with focus on middle, operational level specialists.¹³

Key results:

- under component 2: “Strengthening of Institutional Development Capacities of the Regional Institutions”:
- Assessment and Preparation of Capacity-Building Programme
- Study Tour to the First European Conference on Climate Change in Hamburg (Germany) on 18th – 20th March
- Training on Environmental Impact Assessment and Strategic Environmental Assessment (The first Regional seminar to train trainers was held in Almaty, Kazakhstan, 23rd - 24th April, 2013. The seminars on the national level were held in Bishkek, Kyrgyz Republic, 27th – 28th August, 2013 and in Dushanbe, the Republic of Tajikistan, 17th – 18th October, 2013.)
- Round Table Discussion of the Draft Water Management Programme for Kazakhstan for 2014–2040.

¹¹ EUROPA/ capacity4dev/ Environment in the EU's Eastern neighbours/ Wiki/ Project: EU Water Initiative in Eastern...: <https://europa.eu/capacity4dev/env-east/minisite/4-water-management/project-eu-water-initiative-eastern-europe-caucasus-and-central-asia-euw>

¹² EUROPA/ capacity4dev/ Environment in the EU's Eastern neighbours/ Wiki/ Project: EU Water Initiative in Eastern...: <https://europa.eu/capacity4dev/env-east/minisite/4-water-management/project-eu-water-initiative-eastern-europe-caucasus-and-central-asia-euw>

¹³ The Regional Environmental Centre for Central Asia/ Main Page/Activity/ Projects/ CAWECCOOP: <http://careeco.org/en/main/activity/projects/prodvizhenie-dialoga-dlya-predotvrashcheniya-raznoglasiy-po-voprosam-svyazannym-s-upravleniem-vodnym/>

- Regional Seminar - European Union / Central Asia on Environmental Governance and Climate Change” was held in Brussels on 10h and 11 April 2014.

Promotion dialogue for conflict prevention related to water nexus in Central Asia – CA WECCOP 2 – “The Regional Coordination and Support for the EU-Central Asia Enhanced Regional Cooperation on Environment, Climate Change and Water” project was launched by the EU in August 2016 and is being implemented up to August 2019. It is the second phase of WECCOP (2012-2014).

The project's overall objective is to promote and strengthen enhanced regional cooperation on environment, climate change and water, both between the EU and CA and within CA, in particular through the EU-CA Platform for Environment and Water Cooperation and the Working Group on Environment and Climate Change (WGECC) chaired by the Italian Ministry for the Environment, Land and Sea.

This project is funded by the European Union and implemented by a consortium led by Stantec including as consortium partners the Austrian Environment Agency (Umweltbundesamt) and the Regional Environmental Centre for the Caucasus (REC Caucasus).¹⁴

WECCOP2 activities provide technical and organizational resources and expertise for the events feeding into the sectorial dialogue. The project has developed the Investor Guide and established the Regional Knowledge Centre web platform. WECCOP2 assists CA countries with access to environmental financing through identification of relevant investment and technical assistance projects and development of an online database of such projects. The Platform is designed to facilitate synergies between different programs and ensure the coordination of donors’ activities in the sector.¹⁵

“Smart Waters” United State Agency for International Development - Regional Environmental Centre for Central Asia project. The Smart Waters Project supports the USAID Central Asia regional mission’s Development Objective on “Enhanced Regional Cooperation on Shared Water Resources”. Project is implemented from October 1, 2015 to September 30, 2020 by CAREC in six countries of CA region: Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

The main goal of the Smart Waters project is to address the knowledge dislocation in the regional water sector, build working relations among water managers and specialists, and demonstrate the potential of the basin management approach and cooperation with the academia.

To meet main goals, project is implemented through the following components:

- Component I - Capacity Building & Academic Exchange with the aim to enhance the water sector cadre potential in CA and Afghanistan, to train the new generation of water professionals capable for applying IWRM principles in their everyday work, to promote the application of science-based instruments in routine water management;
- Component II - Networking & Cooperation will target an increase of linkages and dialogue among water organizations, water professionals and academic communities in CA and Afghanistan;
- Component III - IWRM Promotion & Support will focus on a wider acceptance and use of key IWRM principles on all levels of water management in CA and Afghanistan;

¹⁴ WECCOP2/ Project/ Overview: <http://www.weccop2.eu/project/overview>

¹⁵ WECCOP2 Project/ Action plan: <http://www.weccop2.eu/project/action-plan>

- Component IV – Basin Planning will help to introduce long-term planning in Central Asia and Afghanistan on the river basin level.

Illustrative events taking place under Smart Waters are: scholarships for a 2 year IWRM Master Program at German-Kazakh University; demo-tours to successful, small transboundary basin sites; development and short-term courses for selected water managers; advisory services to the interested water ministries training modules for basin organizations for them to prepare their own basin management plans; facilitation of joint learning process in the classroom, collaboration in the field, and interaction at international and regional events. The project will also contribute to the development of demand-based researches for improvement of practical solutions on project territories.¹⁶

The Water Productivity Project (WAPRO) is a multi-stakeholders joint forces to enhance water productivity. Positioned within the Global Programme Food Security of the Swiss Agency for Development and Cooperation (SDC) a multi-sectoral group of actors under the lead of HELVETAS Swiss Inter-cooperation allied to roll out an innovative approach to address inefficient irrigation practices in smallholder farming of cotton and rice. Helvetas supports the enhancement of food security, water efficiency and income of at least 45'000 farmers in Asia that either produce cotton or rice. WAPRO as a multi-stakeholder initiative implements six subprojects to address these issues in Kyrgyzstan, India, Tajikistan and Pakistan. The consortium of partners implements the subprojects and activities based on a co-financing model. The project is implemented from 2015 to 2021. The policy component of the project is strongly based on water stewardship ideas. Rather than waiting for policy changes that may come from the top-down, water users (farmers that need the water for agriculture, but also villagers that need water for household purposes) jointly agree on a reasonable way to share available water resources and on plans to improve the local water situation.¹⁷

The project has four main pillars:

1. Promote a water user's approach in internal policy discussion
2. Address knowledge gaps:
 - compiling available know-how and tools on water management
 - raising awareness among stakeholders
 - building capacities of extension services
 - promoting improved measures and technologies
 - measuring and monitoring water use
3. Overcome lack of incentives:
 - trade agreements between buyers and producers that address water management
 - technical support of producers in applying tested water saving practices
 - financial incentives to join the programme
4. Address inappropriate water governance:
 - capacity building of local project implementers to facilitate procedures around water stewardships

¹⁶ The Regional Environmental Centre for Central Asia/ Activity/ Projects/ USAID-CAREC project on "Smart Waters": <https://www.carececo.org/en/main/activity/projects/voda-obrazovanie-i-sotrudnichestvo/>

¹⁷ Helvetas Tajikistan/ WAPRO: <https://www.helvetas.org/en/tajikistan/what-we-do/how-we-work/our-projects/Asia/Kyrgyzstan/global-water-productivity-WAPRO>

- strengthening capacities of water user associations in implementing joint action plans strengthening national policies conducive to efficient water use based on evidence and experience

Water Initiatives Support Program (WIS), Regional Environmental Centre for Central Asia Programme. Within Central Asia, CAREC’s WIS Program supports regional cooperation by building capacities and networks on topics related to water management, environment and sustainable development as well as on local level through the development of transboundary small basin councils, basin planning and water management solutions.¹⁸ The program cooperates with the ministries of water, agriculture, environmental protection, emergency situations, hydro meteorological agencies, as well as, with local authorities, basin councils, NGOs, farmers, water users, local communities.¹⁹

The main donors of the program projects are UNECE, USAID, GIZ, Ministry of Climate and Environment of Norway, UNDP, European Commission, World Bank and World Bank institute, FAO, Government of Finland, and IWMI.

Water Initiative Support Programme is focusing on five main directions;²⁰

1. Water quality and environmental aspects
2. Transboundary cooperation
3. Training and capacity building for water sector
4. Knowledge hub and cooperation platform
5. Analytical works

Key results²¹:

1. Water quality and environmental aspects:
 - in 2003-2010 WIS implemented a project on clean drinking water supply in small villages in Almaty Oblast, Kazakhstan: the water supply systems of 10 villages were reconstructed, 10 water users’ cooperatives were organized, and more than 11,000 people gained access to potable water;
 - “Water quality in Central Asia” project (2009-2012): basic water quality monitoring model including five parameters was developed;
 - diagnostic report and a plan of development cooperation «Development of regional cooperation ensuring water quality in Central Asia» was developed;
 - coordination of joint assessments, monitoring and information exchange on water quality was improved in two transboundary rivers – Talas and Vakhsh;
2. Transboundary cooperation:
 - Ili-Balkhash Basin Integrated Management Plan was developed and accepted by the Government of Kazakhstan; in addition, trilateral international agreement on Ili-Balkhash Basin between Kazakhstan, China and Kyrgyzstan was drafted and accepted by the Government of Kazakhstan;

¹⁸ CAREC Annual report 2014 (p.10): https://carececo.org/en/main/ckh/publications/godovoy-otchet-rettsa/?sphrase_id=2963082

¹⁹ Main Page/ What We Do/ Programs & Departments: Water Initiatives Support Program (WIS): <https://carececo.org/en/main/activity/programs/wis/>

²⁰ CAREC Annual Report 2015: [https://wedocs.unep.org/bitstream/handle/20.500.11822/7541/-Regional_Environmental_Center_for_Central_Asia_\(CAREC\)_Annual_report_2015-2015Regional_Environmental_Center_for_Central_Asia_CAREC_2015_Annual_Repor.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/7541/-Regional_Environmental_Center_for_Central_Asia_(CAREC)_Annual_report_2015-2015Regional_Environmental_Center_for_Central_Asia_CAREC_2015_Annual_Repor.pdf?sequence=3&isAllowed=y)

²¹ Main Page/ What We Do/ Programs & Departments: Water Initiatives Support Program (WIS): <https://carececo.org/en/main/activity/programs/wis/>

- IWRM Plan for Aral-Syrdarya Basin was developed and approved by the Aral-Syrdarya Basin council;
 - local stakeholders' committees/small basin councils established in three small watersheds (2 transboundary: Isfara and Aspara river basins, 3 national: Ugam (KZ) and 2 irrigation zones in Kazakh part of Aral-Syrdarya Basin for promotion and development of joint transboundary action plans for sustainable development of watersheds;
 - IWRM plans for Isfara, Aspara and Ugam was developed and approved by local communities, local authorities and on national level.
3. Training and capacity building for water sector
 - development of a training module on water quality in CA and its approbation on university students in Kazakhstan and Kyrgyzstan, April-May 2012;
 - “Central Asian Leadership Programme on Environment for Sustainable Development” (CALPESD) was initiated by UNEP and CAREC successfully conducted in 2010-2014 and planned for 2015-2017.
 - development of a handbook on basin planning for water practitioners and water users all the Central Asian countries.
 4. Knowledge hub and cooperation platform
 - networking with educational institutions in CA and abroad in order to establish a regional knowledge platform “center of excellence” in CA on land and water resources management for climate-smart agriculture to provide sustainable transfer of knowledge and skills through an increased institutional capacity and improved quality of educational programmes and knowledge-sharing skills;
 - development of a knowledge portal on basin planning and support experience exchange among water management practitioners: www.riverbp.net;
 - integrating efforts of various stakeholders for dissemination of best practices and knowledge;
 - national and regional working groups on water quality and IWRM, which include representatives of ministries of water management, environmental protection, health care, emergency situations, and hydrometeorological services of all Central Asian countries, as well as, independent experts.
 5. Analytical works:
 - analytical report on baseline key features and characteristics of Ile-Balkhash river basin, developed within the project of EU “Development of integrated management plan for Ile-Balkhash basin, Kazakhstan” (2007);
 - regional report on water quality in Central Asia: diagnostic report and cooperation development plan “Development of regional cooperation to ensure water quality in Central Asia”, developed within the project of UNECE “Water quality in Central Asia” (2012);
 - national reports on assessment of legal and institutional frameworks for integrated water resources management and river basin planning: national report on assessment of legal and institutional frameworks for integrated water resources management and river basin planning in the Republic of Kazakhstan, developed within the project of USAID “Stakeholders’ partnerships in collaborative policymaking (2013).

Water Management and Basin Organizations in Central Asia (WMBOCA). From 2012 to 2015, GIZ Transboundary Water Management in Central Asia Programme contributed to the Regional Environment Programme for Central Asia (EURECA) implementing its part “Water Management and Basin Organizations in Central Asia (WMBOCA)”.

WMBOCA consisted of two interrelated actions:

- Supporting water management and strengthening transboundary river basin administrations in CA. This action aimed at supporting regional and national institutions to promote basin principles and related water sector reforms in the region. Other objectives were to establish new joint administrative bodies on transboundary level as model cases for CA; strengthen public participation in water management and initiate exchange of best practices between European and CA water management organizations.
- Capacity building on river basin planning for water management organizations and joint river basin structures. The main objectives for this action was to improve the human capacities for basin planning, support the establishment and professionalization of (inter-)state administrative basin planning processes in selected river basins and to build capacities for the introduction of economic and financial instruments related to river basin planning.²²

Among other results there are:

- Basin Planning for the Isfara River in Kyrgyzstan and Tajikistan²³:
 - five training sessions and four expert meetings providing theoretical and practical knowledge for the development of river basin plans were organized
 - Isfara River Basin Plan was developed
 - a handbook on basin planning (in versions for Kyrgyzstan and Tajikistan respectively) and a training module were developed and disseminated
 - GIS maps were created in English, Russian, Kyrgyz and Tajik and have been distributed to all of the relevant water management organizations of both countries.
- Improving Integrated Water Resources Management in the Aral-Syrdarya basin²⁴:
 - implementation of the IWRM Basin Plan for the Aral-Syrdarya Basin Council
 - establishment of basin councils for the Aral basin in Kyzylorda Oblast and the Ugam-Keless basin in South Kazakhstan Oblast
 - organization of basin councils' meetings.

National policy framework for water governance and integrated water resources management in Uzbekistan. Supporting water governance, this programme is part of the EU bilateral MIP 2014-2020 for Uzbekistan and promotes best European practice based on the EU Water Framework Directive.

The programme brings together GIZ's worldwide experience in supporting integrated water resources management and the expertise of its partner organizations, the International Water Management Institute (IWMI), the Council for Research and Economics in Agriculture (CREA) and the Environment Agency Austria (Umweltbundesamt). A National Working Group consisting of all national stakeholders active in the water sector will guarantee that recommendations, policy packages, capacity building and other measures are tailor-made for the country's needs and will contribute to an improved water governance based on European / international standards. The programme also foresees the creation of synergies with other donor activities in Uzbekistan.

The programme includes three components that are closely interconnected:

²² Transboundary Water Management in Central Asia/ WMBOCA – finalized: <http://waterca.org/en/wmboca-finalized/>

²³ WMBOCA/ Basin Planning for the Isfara River in Kyrgyzstan and Tajikistan: http://www.cawater-info.net/bk/water_law/pdf/basin-planning-isfara-kg-tj-en.pdf

²⁴ WMBOCA/ Improving Integrated Water Resources Management in the Aral-Syrdarya basin: http://waterca.org/wp-content/uploads/2016/11/factsheet_Aral_final_15.05.pdf

1. Component 1 - shaping a national policy framework for water governance and integrated water resources management (implemented by GIZ),
2. Component 2 - technical capacity building (implemented by UNDP)
3. Component 3 - awareness raising (implemented by the EU Delegation to Uzbekistan).²⁵

²⁵ Transboundary Water Management in Central Asia/ Water Governance – in progress:
<http://waterca.org/en/english-water-governance-in-progress/>

5. Education

Education forms the foundation of revitalizing scholarly work in the Central Asian region, as it cultivates the next generation of water specialists and decision-makers. This chapter features key initiatives related to the development of educational programmes in the field of Water Resources Management in Central Asia.

List of existing Higher Education Institutions in CA can be found under the [Annex I](#) including the List of HEIs in CA with contacts.

5.1 Higher Education Institutions for water education in Central Asia

Afghanistan. The research shows two key universities - Kabul Polytechnic University and Kabul University that train future specialists in such fields as irrigation and hydro technical construction, as well as agricultural directions).

Kazakhstan. Eight key universities in the Republic of Kazakhstan prepare specialists for water management field. Future specialists are trained in three main directions – technical, agricultural and natural sciences. The principal water-related specialties offered by the universities in Kazakhstan are:

- Hydrology
- Water resources and water use
- Water supply and sanitation
- Hydro technical Construction / Hydraulic engineering and construction
- Land improvement, restoration and protection of land.

Moreover, almost every university in Kazakhstan offers such a program as “Ecology” (for all the educational levels – BA, MA, PhD), and several universities have programs like “Geography” and “Fisheries and commercial fisheries” – all these programs are devoted to water resources related issues.

Kazakh-German University offers a unique Master program – “Regional studies: Integrated water resources management” that covers interdisciplinary issues in the field of supply, distribution and rational use of water resources in CA, and unites students from all CA countries and Afghanistan.²⁶

Kyrgyzstan. Six universities in Kyrgyzstan currently provide academic programs related to water resources. Key specialties in this field are:

- Hydrometeorology
- Construction (Hydraulic engineering; Water supply and sanitation)
- Land improvement, restoration and protection of land
- Agricultural water supply systems:
- Integrated use and protection of water resources
- Power industry and electrical equipment (Hydroelectric power)

There are several universities that train specialists on the program “Ecology and environmental management”, which includes water-related courses.

²⁶ Kazakh-German University/ Prospective students/ Master/ Regional studies: IWRM: <https://dku.kz/en/content/programm-view/?id=51>

American University of Central Asia in Kyrgyzstan has a specific academic program – “Environmental Management and Sustainable Development”, which was prompted by Central Asia’s need for environmental experts and AUCA’s mission to support the region’s transition to a development path that balances social, economic and environmental interests.²⁷

Tajikistan. Three universities and one institute (Institute of Water problems, Hydropower and Ecology) of Tajikistan chosen based on the information availability (updated website, Russian/English languages available, request reply received).

Main water-related specialties in Tajik universities:

- Land improvement and water management
- Hydraulic engineering
- Rational use and protection of water resources
- Water supply systems
- Construction and operation of hydroelectric power plants
- Hydrology and glaciers

The Institute of Water problems, Hydropower and Ecology additionally offers such academic programs as “Purification of natural and waste water” and “Hydraulic Engineering and Facilities”.

Turkmenistan. In the framework of the research we were able to obtain information on two universities:

- Turkmen Agricultural University Named after S. A. Niyazov - offers such programs as “Hydro melioration” and “Hydro technical construction”.
- Turkmen State Institute of Architecture and Construction – train students on the program “Water supply and sanitation”.

Uzbekistan. Within this research we would like highlight four universities that train specialists for water-related fields.

The biggest university in Uzbekistan for water education is “Tashkent Institute of Irrigation and Agricultural Mechanization Engineers” (TIAME). It offers wide range of water-related programs of technical and natural directions: Hydrology, Hydro technical construction, Water management and melioration, Operation of hydraulic structures and pumping stations and other.

In 2018, the project SUSADICA (Structured doctoral programme on Sustainable Agricultural Development in Central Asia) was launched. This project aims at the establishment of Graduate School for doctoral researchers based at TIAME in Uzbekistan and that is established and maintained jointly with Justus Liebig University Gießen, IAMO, Martin Luther University Halle-Wittenberg, CAREC and a network of international partners.²⁸

“National University of Uzbekistan named after Mirzo Ulugbek” trains specialists in Hydrology and Hydrometeorology.

²⁷ AUCA/ Academics/ Divisions/ Environmental Management and Sustainable Development:
https://www.auca.kg/_sustainable_development/

²⁸ IAMO/ Home/ Research/ Projects/ SUSADICA: <https://www.iamo.de/en/research/projects/details/susadica/>

5.2 Academic programs and projects in Central Asia supported by international partners

Pan-regional

Erasmus+ is the European Union's (EU) program to support education, training, youth and sport in Europe. Set to last until 2020, Erasmus+ has opportunities for a wide variety of individuals and organizations. Participation in the program is open for all CA countries and Afghanistan.²⁹

The aim of Erasmus+ is to contribute to the Europe 2020 strategy for growth, jobs, social equity and inclusion, as well as the aims of ET2020, the EU's strategic framework for education and training. It also aims to promote the sustainable development of its partners in the field of higher education, and contribute to achieving the objectives of the EU Youth Strategy.

Opportunities for Individuals. Erasmus+ has opportunities for people of all ages, helping them develop and share knowledge and experience at institutions and organizations in different countries:

- Study abroad with Erasmus+
- Erasmus Mundus Joint Master Degrees
- Volunteering Activities
- Youth Exchanges
- Teach abroad with Erasmus+
- Traineeships with Erasmus+

Opportunities for Organizations. Erasmus+ has opportunities for a wide range of organizations, including universities, education and training providers, think-tanks, research organizations, and private businesses.

The water-related winner projects with the participation of CA countries' universities are presented below:

- Trans-regional environmental awareness for sustainable usage of water resources (2016-2018). The project was coordinated by the University of Freiburg in partnership with East Kazakhstan State Technical University, and Eurasian National University.
- International University Cooperation on Land Protection in European-Asiatic Countries (2016-2018). Partners in CA: Kyrgyz state technical university named after Iskhaak Razzakov, Osh Technological University named after the academician M. M. Adyshev, D. Serikbayev East Kazakhstan State Technical University, and M. Auezov South Kazakhstan State University.
- Enhancing Competencies of Central Asian Universities in Agricultural Policy Focused on Environmental Protection & Land Management (2016-2018). The project was coordinated by the Slovak University of Agriculture in Nitra in partnership with Kazakh National Agrarian University, Kostanay State University A. Baitursynov, Samarkand State University named after Alisher Navoi, and Karakalpak State University named after Berdakh.
- Environmental Protection in Central Asia (EPCA): Disaster Risk Management with Spatial Methods (2018-2020). The project is coordinated by Lund University in partnership with Kyrgyz State University named after I.Arabaev and Osh State University.

²⁹ European Commission/ Erasmus+: http://ec.europa.eu/programmes/erasmus-plus/node_en

Regional

Master program “Regional studies: IWRM”. The program offered by the Kazakh-German University covers interdisciplinary issues in the field of supply, distribution and rational use of water resources in CA. The aim is to produce an exchange of advanced international practices to aid in solving water and environmental problems at all levels.³⁰

The program content was developed in collaboration with the Free University of Berlin (Freie Universität Berlin) having many years of experience in education in the field of Water Management including CA. Courses are conducted by professors from Freie Universität Berlin and experts from German and CA organizations. Students actively participate in research projects and practical activities.

Modules of the program:

- Theoretical basis of Regional Research
- Methodology of Regional Research
- Water Resources Management
- Environmental Law, Policy, and Economics
- Technical basis of Water Resources Management
- Field Research and Data Analysis

Candidates are eligible to apply for scholarships of German Academic Exchange Service (Deutscher Akademischer Austauschdienst – DAAD) and the Regional Environmental Centre for Central Asia (CAREC) covering cost of study at GKU and living expenses in Almaty.

Structured doctoral programme on Sustainable Agricultural Development in Central Asia (SUSADICA). This project aims at the creation of a collaborative research environment for doctoral researchers that is based at the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIAME) in Uzbekistan and that is established and maintained jointly with Justus Liebig University Gießen, Leibniz Institute of Agricultural Development in Transition Economies (IAMO), Martin Luther University Halle-Wittenberg, CAREC and a network of international partners.³¹

The establishment of this Graduate School is driven by four guiding principles:

1. competitive and transparent recruitment of doctoral researchers,
2. focus on research topics that build a bridge between the international academic discourse and agricultural development challenges relevant for CA,
3. structured education and training of the doctorate students that enables them to conduct independent research, and
4. integration into a network of international partners and events.

The project is supported by the Volkswagen Foundation (VolkswagenStiftung).

Overview of research areas:³²

- Water governance

³⁰ Kazakh-German University/ Prospective students/ Master/ Regional studies: IWRM: <https://dku.kz/en/content/programm-view/?id=51>

³¹ IAMO/ Research/ Projects/ SUSADICA: <https://www.iamo.de/en/research/projects/details/susadica/>

³² SUSADICA - Structured doctoral programme on Sustainable Agricultural Development in Central Asia: Overview of research areas: https://www.iamo.de/fileadmin/user_upload/Bilder_und_Dokumente/04-forschung/Forschungsprojekte/susadica/Overview_of_research_areas.pdf

- Farm restructuring & labor relations
- Agricultural innovations & technology
- Agricultural policy for sustainable development
- Environmental change & agriculture

National

Afghanistan

Afghanistan University Support and Workforce Development Program (USWDP). ³³ The program is financed by the United States Agency for International Development (USAID) and supports the Ministry of Higher Education and 11 public universities to implement strategies designed to ensure quality education and employment opportunities for Afghan students. In addition, the project links universities and potential public and private sector employers and strengthens the management of the partner universities. The partner universities include Kabul University, Kabul Polytechnic University, Kabul Medical University, Shaheed Rabbani Education University, Nangarhar University, Herat University, Balkh University, Kandahar University, Kunduz University, Khost University, and Jowzjan University. The duration of the project was Dec 2013 – Dec 2018.

Accomplishments of the program are next:

- Launched 32 associate, undergraduate, and graduate degree programs in the 11 partner universities;
- Facilitated overseas exchange programs for faculty members as part of their professional development;
- Signed partnerships with 13 US Universities to work with partner Afghan Universities to start new degrees or support existing degrees (associate, undergraduate and graduate);
- Supported the 11 partner universities to develop new, or revise existing curriculum of the 32 degree programs supported by the University Support and Workforce Development Program;
- The 11 partner universities completed the first and second stages of quality assurance and accreditation. The project is currently providing guidance to reach full accreditation;
- Provided more than 70 scholarships to faculty members to enhance their academic qualifications;
- Awarded gender scholarships to approximately 30 females to enroll in various graduate degree programs;
- Installed a unified information, communication, and technology system and trained staff at the Ministry of Higher Education and 11 Public Universities to operate the systems;
- Provided soft skill training to students on interpersonal skills for employment;
- Drafted policies, strategies, and guidelines that were approved by the Ministry of Higher Education and the partner universities.

³³ USAID/ News and Information/ Fact Sheets/ USWDP: <https://www.usaid.gov/afghanistan/fact-sheets/usa-id-afghanistan-university-support-workforce-development-program>

Kazakhstan

Project “Lifelong Learning for Sustainable Development/ SUSDEV”.³⁴ The wider object of the project is enhancement of the role of Higher Education Institutions in ensuring sustainable development of industry and society, support of national “green policies” in Partner Countries and promotion of “green culture” by means of Lifelong Learning. EU project coordinator is Warsaw University of Life Sciences, Poland. Duration of the project: 2016 – 2019.

Main partners in Kazakhstan: Ministry of Education and Science of the Republic of Kazakhstan (MESK); Taraz State University (TarSU); Seifullin Kazakh Agrotechnical University (KazATU); Kazakh National Agrarian University (KazNAU); Atyrau State University (ASU); West Kazakhstan Agrarian-Technical University - Uralsk (WKATU); Kostanay State University (KSU); KZ Agency of Applied Ecology (KAPE); Coalition for Green Economy (ALE) - Associated Partner

Specific project objectives:

- development of modules to foster green skills for different target groups and qualifications levels
- enhancement of access of target groups to open education resources, promotion of LLL
- enhancement of green culture and continuing education through training of teaching staff, external stakeholders and public administration

Main activities of the project

- Analysis of "green policies and practices" in European Higher Education Area and in partner Countries
- Creation of Open Education Resources (OER)
- Creation of Green Training Centers (GTC)
- Development of Green Training Modules (GTM)
- Implementation and upgrading of training courses

Kyrgyzstan

Environmental management and sustainable development. The creation of this program was prompted by Central Asia’s need for environmental experts and AUCA’s mission to support the region’s transition to a development path that balances social, economic and environmental interests. This program perfectly fits the university’s mission of training enlightened and impassioned leaders, who think globally and act this out locally in the specific conditions of Central Asia.

In 2011, AUCA and Norwegian University of Life Sciences (UMB) were awarded a grant by the Norwegian Centre for International Cooperation in Education. The grant funds were used for the development of nine courses for an undergraduate and graduate level program in Environmental Sustainability.³⁵

The program includes, among others, the following courses:

- Water Resource System Planning and Management course is designed to acquaint students with the role of analytical methods in water resources planning processes.

³⁴ SUSDEV/ About project: <http://www.susdev.confer.uj.edu.pl/about-us>

³⁵ AUCA/ Academics/ Divisions/ Environmental Management and Sustainable Development/ Sustainability Board/ Partnership: <https://www.auca.kg/en/emsdpartnership/>

- Environmental Management System (EM) is to impart an understanding of systems approach as per ISO 14001:2004 and skills for the management of environmental issues.
- Geographic information system (GIS) Application in EM
- Introduction to R: this course gives students an opportunity to use the public domain and free software R to perform statistical computing. This course has an interconnection with GIS.

Tajikistan

Earth & Environmental Sciences – Bachelor of Science. This is a cross-disciplinary program of the University of Central Asia (UCA) that integrates the study of socio-cultural, ecological and geological systems to create informed and engaged leaders and scholars. The program was established in 2018 in Khorog at UCA. The program draws on the vast diversity of life experiences, ecological zones and cultures in Central Asia’s mountainous regions and addresses complex regional and global problems such as climate change, poverty, environmental degradation, intolerance and food and energy insecurity.³⁶

The Earth and Environmental Sciences curriculum was developed in collaboration with the University of British Columbia in Canada, and this specialization benefits from the resources of UCA’s Mountain Societies Research Institute.

The list of required courses of this program includes: Mixed Research Methods; Introduction to Geographic Information System (GIS) and Remote Sensing; Ways of Knowing: Mountain Environments in Thought and Practice; Environmental Governance: Water, Air, Land, and Biosphere; Environment and Development in Mountain Regions; Science, Impact, and Complexity of Climate Change; Natural Hazards and Risk Management in Mountain Regions; Introduction to Geology and Earth Processes; Introduction to Geological Materials and Resources; Surface Processes in Mountain Environments; Hydrology and Hydrogeology.

5.3 On-line education (electronic courses and distant learning)

“Integrated Water Resources Management” study course. This study course for universities of Kazakhstan and Central Asia was developed in 2007 by the Center “Cooperation for sustainable development” (CSD Center) with the support of United Nations Educational, Scientific and Cultural Organization (UNESCO) Almaty Cluster Office. The course materials were updated in 2016.

The updated IWRM course helps young specialists to obtain management skills in the field of water use and protection, as well as contributes to capacity building enabling them to address water issues in decision-making process. Understanding of future specialists, the main causes of problems in water sector will help countries to make a general vision of their solutions and the measures of their implementation.³⁷

Distance Learning Modules: Southwest and Central Asia Waters. The University of Nebraska at Omaha (UNO) Center for Afghanistan Studies (CAS) initiated this project “Trans-boundary Shared Water Resources in South and Central Asia: Alleviation of Problems encouraging

³⁶ UCA/ Admission/ Undergraduate program/ Earth and Environmental Sciences:

<https://www.ucentralasia.org/Admissions/EarthAndEnvironment/EN>

³⁷UNESCO Almaty Cluster Office for Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan/ Natural Sciences/ Updated materials of the "Integrated Water Resources Management" study course: <http://en.unesco.kz/updated-materials-of-the-integrated-water-resources-management-study-course>

collaboration between Afghanistan and Pakistan and Tajikistan” and funded by U.S. Institute of Peace (USIP) and Lounsbery Foundation. It aimed to develop people-to-people dialogue and mutual collaboration among faculty, students, government officials and community members in Afghanistan, Pakistan and Tajikistan to address the critical issue of transboundary water issues that are creating increased conflict and insecurity in the region.³⁸

In the framework of the project, CAS developed twenty distance-learning modules that are available to universities throughout the region and accessible in five languages, English, Pashto, Dari, Tajik and Urdu:

1. Hydrologic cycle
2. Hydro-cycle in Southwest Asia
3. Rivers of Hindu Kush, Pamir, Hindu raj
4. Afghanistan lakes
5. Measuring water
6. Climate change implications
7. Afghanistan transboundary resource management
8. Floods & natural hazard management
9. Market mechanisms for water sharing
10. Water law & water treaties
11. River dams
12. Kabul-Panshir-Kunar river hydropower & irrigation
13. Panj and Amu Darya hydropower & irrigation
14. Helmand hydropower & irrigation
15. Afghanistan ground-water issues
16. Hydro-capacity building
17. Water info sharing & upstream – downstream issues
18. Glacier inventory
19. Hi-tech& grant money partnerships
20. Hydro-hegemony

Each module contains a brief tutorial with figures and captions that discuss water movement on Earth and various topics centered on the region. Sample questions are available at the end of each module in an effort to help with knowledge retention.

5.4 Student-oriented projects (summers schools, project competitions, etc.)

Regional

Students Research Competition. Since 2014 CAREC with the WB led TF CAWEP holds a regular competition for conducting Master's research. The main idea of the competition is to support the student society and to conduct a scientific research aimed on developing methods of rational management of the Water Resources and on protecting the environment in CA countries.³⁹ Since 2018 the implementing partner of this project is Kazakh-German University.

The competition is open for the participants from all Central Asian countries.

³⁸ UNO/ International Programs/ Center for Afghanistan Studies: <https://www.unomaha.edu/international-studies-and-programs/center-for-afghanistan-studies/academics/transboundary.php>

³⁹ The Regional Environmental Centre for Central Asia/ Activities/ Projects/ Community of Practice Students Competition: <https://www.carececo.org/en/main/activity/projects/konkurs-studencheskikh-rabot-na-provedenie-magisterskikh-issledovaniy/>

Main project objectives:

- Establishing and supporting activities by the academic community network comprised of members of Central Asian universities, scientific and R&D organizations;
- Carrying out a competition of master student research applications;
- Rendering financial support to the winners of the applications competition;
- Holding a project-specific awareness-raising campaign.

In 2018, seventeen students successfully passed the Student research competition on sustainable management of natural resources in CA and Afghanistan 2018-2019. The competition was announced by CAREC with the financial support from the Climate Adaptation and Mitigation Program for Aral Sea Basin (funded by WB) and Smart Waters Program (funded by USAID) project. The selected applications covered such topics as disaster risk assessment, a study of snow cover formation, water-energy nexus, integrated and adaptive water resource management, climate vulnerability assessment, the current distribution of wetlands, application of a spate irrigation system, transboundary water management, promotion of eco-tourism in the river basin and other related topics.⁴⁰

The competition's winners receive financial support to carry out their research, including costs for field trips, surveys, laboratory tests, printing, etc. Moreover, the students have additional support from the supervisors with significant research and publishing experience.

International University Cooperation on Land Protection in European-Asiatic Countries (IUCLAND). This educational project is funded by the Erasmus+ Programme under the Key Action 2 on “Cooperation for innovation and the exchange of good practices”. The project implementation period lasted from 2015 to 2018. The aim of IUCLAND was to foster international cooperation among partner Universities through the implementation of training activities (namely summer schools and workshops) dedicated to the topic of land degradation. Indeed, the project promoted international cooperation at both the regional and cross-regional level, by allowing the interaction among European, Far East Asian Central Asian partners.⁴¹

Four CA universities participated in the project:

- KSTU - Kyrgyz state technical university named after Iskhaak Razzakov
- OshTU - Osh Technological University named after the academician M. M. Adyshev
- EKSTU - D. Serikbayev East Kazakhstan State Technical University
- SKSU - M. Auezov South Kazakhstan State University

By the end of the project period, six summer schools have been carried out, one for each of the country project partners, including one in Kyrgyzstan (in 2017) and one in Kazakhstan (in 2018).⁴² Moreover, eleven workshops on various topics related to land degradation were delivered remotely as online webinars, involving professors and researchers from partner universities in order to share knowledge about summer schools-related topics.⁴³

IWRM mobile applications development project. This project was launched on the 26th of March 2015. In this project, students and undergraduates of Kazakh-German University studying

⁴⁰ The Regional Environmental Centre for Central Asia/ News/ Support of young specialists - research competition: https://www.carececo.org/en/main/news/news/CAMP4ASB-research-contest/?sphrase_id=1590203

⁴¹ IUCLAND/ Home: <http://www.iucland.eu/index.php>

⁴² IUCLAND/ Summer schools: <http://www.iucland.eu/index.php/summer-school>

⁴³ IUCLAND/ Workshops: <http://www.iucland.eu/index.php/workshops>

IT and IWRM have developed mobile applications together with independent IT consultants. The project was supported by the WB CAWEP.

The project partners, acting as customers for the applications, are the executive management of the International Fund for Saving the Aral Sea in Kazakhstan, RSE "Kazhydromet" and the Regional Hydrological Center, as well as the online journal "Integrated water resources management in Central Asia".⁴⁴

"Methods and Tools for the Assessment and Monitoring of Central Asian Water and Land Resources" Summer School is organized annually at Kazakh-German University together with Central Asian Water (CAWa), and is supported by the OSCE Programme Office in Astana. The Summer School covers various IWRM-related topics such as GIS, data collection and information management, practice of field research and more, and addresses dedicated master's and PhD students as well as junior university teachers and researchers from CA with an interest in tools for Integrated Water and Land Resources Management and its practical implementation.⁴⁵

The Summer School introduces scientific concepts, methods and tools for the analysis and monitoring of water and land resources in CA which are of great value in the framework of integrated water and land resources management.

Disaster Risk Management Summer University. The University of Central Asia hosted a Summer University on Disaster Risk Management (DRM) in 2017, organized jointly with the Aga Khan Agency for Habitat (AKAH) and the University of Bern, Switzerland. Natural hazards menace human life, livelihoods and assets all over the Pamir, Hindu Kush, Tian Shan and Karakoram mountains. Intensified land use, greater social complexities and higher concentrations of wealth constitute additional new challenges for DRM specialists, emergency managers and land-use planners.

The issues related to disaster risk and climate change were thoroughly discussed and studied during this first Summer School session, which was embedded in a development project fostering self-sustained and resilient communities, Creating Opportunities in a Safe Environment (COSE), funded by the Swiss Agency for Development and Cooperation (SDC).

Kazakhstan

Trans-regional environmental awareness for sustainable usage of water resources (TREASURE WATER Consortium). The consortium of 14 institutions from four EU and two partner countries (Russia and Kazakhstan) collaborated in order to find answers to the question what various nations could do to manage shared natural resources sustainably. Entitled "Trans-regional environmental awareness for sustainable usage of water resources" – in short TREASURE-WATER – the project aimed to strengthen cooperation between the Russian Federation and Kazakhstan.

The aim of this project was to intensify mobility and exchange between European universities and those in EU neighboring countries, to internationalize student education and to develop new curricula following best practice principles, specifically for:

⁴⁴Institute of Natural Resources on the basis of the Kazakh-German University/ Main/ Science/IWRM mobile applications development project: <http://academic-waters.webflow.io/science-en/mobile-apps-development>

⁴⁵ CAWa/ News: <https://www.cawa-project.net/news-detail/news/cawa-summer-school-2018-at-the-german-kazakh-university/>

- developing a trans-institutional model for interaction between higher educational institutions and enterprises in the field of trans-boundary water resource management
- enhancing teaching capacities of higher educational institutions by developing support tools and staff training
- raising awareness of water problems
- creating potential for internationalization⁴⁶

The project was coordinated by Professor Ralf Reski from the University of Freiburg, Germany, and co-funded by the ERASMUS+ Programme of the European Union. The project took place from October 2015 to October 2018.

Kazakh participant universities included: East Kazakhstan State Technical University (EKSTU) and Eurasian National University (ENU).

Kyrgyzstan

The Ala-Archa Eco-Leadership project. ELP focused on three main subject areas: teaching ecology and water resources through outdoor immersion, increasing leadership skills through practical scenarios and mentorship, and teaching outdoor living skills to help students work independently outdoors.⁴⁷ The Eco Leadership Project is a Catalyst Mind initiative. The Eco Leadership Project helps young people connect with the outdoors for learning, restoration and well-being. Between August 1 and August 12, 2016 six students from AUCA and one student from the Institute of Mining and Mining Technologies named after the Academician Asanaliev volunteered to attend the Ecological Leadership Program (ELP) in the Ala Archa National Park to improve their leadership skills and to learn more about Kyrgyzstan's environment.⁴⁸

⁴⁶ TREASUREWATER/ About: http://treasure-water.eu/?tx_wvpreset%5Barticle%5D=42&back=29

⁴⁷ The Eco Leadership Project/About: <http://www.ecoleadershipproject.com/>

⁴⁸ AUCA/ Academics/ Divisions/ Environmental Management and Sustainable Development/ Environmental Leadership Project/ AUCA students and a student from the Institute of Mining and Mining Technologies volunteered to attend the ELP project Ala Archa: <https://www.auca.kg/en/p3388239115/>

6. Capacity building

It is crucially important for the countries of Central Asia that various water organizations – national and regional water institutions, educational and academic institutions, development agencies, and international organizations – work in concert to create learning opportunities and assist with the generation and acquisition of new knowledge, skills, and experience. This chapter covers existing programs, projects and networks in Central Asia, which are aimed at raising awareness among and enhancing the capacity of water specialists at various levels in the field of water resources management.

A comprehensive list of key partners for capacity building in CA with contacts can be found under the Annex III: Key partners for Capacity Building in Central Asia.

6.1 Capacity building programs and projects in CA

Central-Asian Leadership Programme on Environment for Sustainable Development (CALP). CALP, being a flagship initiative of CAREC, currently is the only regular program to improve environmental capacity for sustainable development in Central Asia among government, academic, private sectors and NGO representatives, which helps to ensure a comprehensive understanding of environmental issues and sustainable development.⁴⁹

The history of CALP began in September 2010, when the first program was held in Astana in parallel with the 6th Conference of Ministers of Environmental Protection and Development of Asian-Pacific Region and was designed for young leaders and potential professionals from the government, private sector and civil society of CA countries. A three-day program was hosted by the Nazarbayev University in partnership with Asian Institute of Technology – AIT, UNEP, the Regional Resource Centre for Asia and the Pacific (RRC.AP) and CAREC.⁵⁰

The 9th CALP was held from 17 to 26 September 2018 in Almaty. It was aimed at strengthening regional cooperation and making sustainable decisions in the field of environmental protection and sustainable development. Therefore, the majority of participants in the 9th CALP were representatives of ministries and agencies for environmental protection, water resources, energy, and foreign affairs, and these are the future decision makers on environmental issues in the region.

The main objective of the 9th CALP was to develop the potential and understanding of young leaders about trends, global challenges and existing regional opportunities for environmental conservation and sustainable development in CA, and to demonstrate the role of young leaders in strengthening regional dialogue between government departments and academia, civil society, business and the international community of CA in the field of development. The 9th CALP was conducted by CAREC in cooperation with the UNEP and with the support of partners and donors – OSCE Programme Office in Astana and the OSCE Centre in Ashgabat, the USAID “Smart Waters” Project, and the WB “Climate Adaptation and Mitigation Program for the Aral Sea Basin” Project and the European Union’s NEXUS project.

⁴⁹ CHANGE. GROWTH. DEVELOPMENT / 2001-2018: https://www.carececo.org/news/Report%20CALP-9_2018.pdf (was available 15/01/19)

⁵⁰The Regional Environmental Centre for Central Asia/ News/ Sixth Central Asian Leadership Programme on Environment for Sustainable Development: https://www.carececo.org/en/main/news/news/sixth-central-asian-leadership-programme-on-environment-for-sustainable-development/?sphrase_id=1590201 (was available 15/01/19)

More information about CALP available at the CAREC website: <https://www.carececo.org/en/main/> (was available 15/01/19)

Target Awareness Raising for Enhanced EU-CA Partnership project (AWARE). The project was implemented with financial support from the European Union in the framework of the EU Regional Environmental Program for the countries of Central Asia and implemented by Regional Environmental Center for Central Asia (CAREC). Activities within the shared environmental information system (SEIS) framework were co-financed by the Swiss Federal Agency for Environment (FOEN).

This two-year project (2012-2014) was implemented in five CA countries: Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan. The AWARE project aimed at raising awareness of four target groups in Central Asian countries, including state officials, civil society, and private sector and Mass Media representatives in the areas of water resources management, energy efficiency, environmental management and integration.⁵¹

Specific project objectives included:

- raising awareness on return and reused water application to eliminate in water resources management;
- expanding opportunities for cooperation between the EU and CA on environmental management issues by way of raising awareness on the most effective and applicable practices such as the shared environmental information system (SEIS);
- engaging the private sector by raising its awareness on sustainable production and consumption and energy efficiency as important elements of public-private partnerships.

Several workshops and trainings took place within the framework of the project. A National Workshop, «Targeted Awareness Raising for Enhanced European Union - Central Asia Partnership», was held on October 25, 2012 in Astana city; National Workshop was held on May 21, 2012 in Bishkek, Kyrgyz Republic; A national workshop took place on September 17, 2012 in Tashkent city with the aim to implement SEIS-oriented projects and etc.

Training for young Civil servants of Central Asia. In 2015, the first attempt was made by the Kazakh-German University to bring young Central Asian civil servants together for a joint study trip (both in Almaty and Berlin) to allow them to discuss various aspects of trans-boundary water management together with national experts and representatives of international organizations.

Participants met with German specialists and partners in the “Berlin Process” and were familiarized with the achievements of German trans-boundary water management, technical industry advances and scientific research.⁵²

Trainings for trainers and young civil servants of Kazakhstan. The project sponsored by the EU, UNDP and the UNECE and implemented by Kazakh-German University (KGU) was aimed at fostering a transfer of knowledge and experience in water resources management from Europe

⁵¹ The Regional Environmental Centre for Central Asia/ Projects/ Water Initiatives Support Program/ Target Awareness Raising for EU-CA: [https://carececo.org/en/main/activity/projects/tselevoe-povyshenie-ekologicheskoy-osvedomlennosti-dlya-usileniya-partnerstva-evropeyskogo-soyuza-i-/](https://carececo.org/en/main/activity/projects/tselevoe-povyshenie-ekologicheskoy-osvedomlennosti-dlya-usileniya-partnerstva-evropeyskogo-soyuza-i/)

⁵² Institute of Natural Resources on the basis of the Kazakh-German University/ Main/ Capacity development/ Training for young Civil servants of Central Asia: <http://academic-waters.webflow.io/capacity-development-en/training-for-young-civil-servants-of-central-asia-states> (was available 15/01/19)

to Kazakhstan. Duration of the project was 3 years (2015-2018). The trainings targeted two main groups – civil servants and teaching personnel from Kazakhstan’ higher-education entities.

Within the project implementation were held 3 trainings for teachers of Kazakh Universities and 3 trainings for young governmental representatives of Kazakh state organizations. The main outcome of the project was development of teaching manuals related to key aspect of water resources management. The second edition of the manuals was adopted for the purposes of use by the practitioners of the water sector.

6.2 Networks and platforms for capacity building in CA

Networks for capacity building

Central Asian Regional Water Network CAR@WAN. The network operates since 2012. CAR@WAN is supported by Cap-Net UNDP - international network for capacity development in sustainable water management. It is made up of a partnership of autonomous international, regional and national institutions and networks committed to capacity development in the water sector. The Cap-Net UNDP programme is a part of the Water and Ocean Governance Programme of UNDP, within the Sustainable Development Cluster of the Bureau for Policy and Programme Support. The programme is executed by United Nation’s Office of Project Services (UNOPS), Water and Energy Cluster.⁵³

The main goal of CAR@WAN is to bring together partners involved in the processes of studying and managing water resources in order to promote the principles of IWRM, thus contributing to environmental protection, increasing well-being and improving public health.⁵⁴ Currently, the participating countries are Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan. As the network expands in the future, the possibility of participation of representatives from other regions.⁵⁵

Central Asia Youth Forum on Water – CAYFWATER. The network was established in 2015 by students of the Kazakh-German University and opened for the young professionals from water sector from Central Asian states and Afghanistan. Since end of 2018 the network received financial and institutional support from the Swiss Agency for Development and Cooperation (SDC) within its Blue Peace Initiative, and International Secretariat for Water. The network annually conducts several events aimed at enhancement of the professional capacities of future water professionals organizing divergent activities: scientific colloquia’s called Water Days held at different universities of Central Asia, regional water contests in IWRM, and summer schools.

The mission of CAYFWATER focuses on:⁵⁶

- Empowering young water professionals in CA in offering knowledge-based solutions oriented to respond to needs of business, decision makers and civil society at local, national and regional levels of water management;
- Creating an opportunity for young professionals for further professional development via participation in existing senior water professional’s networks;

⁵³ Cap-Net/ About Cap-Net: <http://www.cap-net.org/about-cap-net/> (was available 15/01/19)

⁵⁴ CAR@WAN/ About us: <http://www.carawan-net.org/> (was available 15/01/19)

⁵⁵ CAR@WAN/ About us/ Network information: <http://www.carawan-net.org/eng/about-carawan> (was available 15/01/19)

⁵⁶ https://programme.worldwaterweek.org/Content/ProposalResources/PDF/2017/pdf-2017-6768-3-Eraaliev_Tulieva%20Perspectives%20from%20Central%20Asia.pdf (was available 15/01/19)

- Conducting youth advocacy to ensure youth recognition as an important stakeholder in the decision-making for water sector and to raise youth awareness about water issues.

Central Asia Knowledge Network (CA KN) – a project under the WB led programmatic technical assistance CAWEP program since 2011. The goal of Central Asian knowledge network is to promote cooperation and knowledge sharing between local and regional institutions and practitioners in the field of water and energy resources management, as well as climate change in Central Asia.

The project aims to a regional network of scientific and educational institutions and communities of practicing technical experts. Covering the five Central Asia countries of Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan, and the Kyrgyz Republic, plus Afghanistan, the Network supports coordinated access to water management and climate knowledge for various stakeholders, and contributes to the World Bank Group’s operational projects in the region.

Platforms for capacity building

The Water, Energy & Food Security Resource Platform - Nexus Region Central Asia. The Water, Energy & Food Security Resource Platform is independent information and facilitating platform funded by the Federal Ministry of Economic Cooperation and Development and the European Union and operates since 2011. The Nexus approach highlights the interdependencies between achieving water, energy and food security for human well-being, e.g. basics services and economic development, while ensuring ecologically sustainable use of globally essential resources. It is based on an understanding of the synergies and regulated negotiation of fair trade-offs between competing uses of water, land and energy-related resources.⁵⁷

An analysis of the dynamic links between water, energy, food and ecosystems is crucial for CA region in order to understand the challenges in this area. The WEF-Nexus perspective will not only allow for the identification of the synergies between the different users of the natural resources, but it will also help to avoid trade-offs and social conflicts that might occur. Intraregional cooperation will be essential to meet the described challenges.⁵⁸

The *Central Asia Nexus Dialogue project: Fostering Water, Energy and Food Security Nexus Dialogue and Multi-Sector Investment*⁵⁹ is an EU-funded project that is part of a global program with activities also in Latin America, Africa and the Middle East. In CA, the project is implemented by CAREC in partnership with the International Union for Conservation of Nature and Natural Resources (IUCN) from December 2016 to December 2019. The ultimate goal of the project is to prepare the ground for investments within the EU Nexus Dialogues Programme (Phase II). To achieve this goal, the project supports the development of a regional investment programme “Aral Sea Basin Program” (ASBP) by fostering multi-sectoral dialogue and cooperation nationally and regionally.⁶⁰

⁵⁷ Nexus - The Water, Energy & Food Security Platform/ Introduction: <https://www.water-energy-food.org/about/introduction/> (was available 15/01/19)

⁵⁸ Nexus - The Water, Energy & Food Security Platform/ Nexus Region Central Asia: <https://www.water-energy-food.org/regions/central-asia/> (was available 15/01/19)

⁵⁹ Central Asia Nexus Dialogue Project: Fostering Water, Energy and Food Security Nexus Dialogue and Multi-sector Investment: <https://carececo.org/en/main/activity/projects/tsentralno-aziatskiy-dialog-po-ispolzovaniiyu-vozmozhnostey-mnogosektoralnogo-finansirovaniya-putem-u/> (was available 15/01/19)

⁶⁰ Nexus - The Water, Energy & Food Security Platform/ Resources/ Central Asia Nexus Dialogue Project: <https://www.water-energy-food.org/resources/resources-detail/central-asia-nexus-dialogue-project-fostering-water-energy-and-food-security-nexus-dialogue-and-multi-sector-investment/> (was available 15/01/19)

7. Science and Research

A number of research institutes contribute to a reliable scientific regional data base for the development of sustainable water management strategies in Central Asia. The chapter gives an insight into research programs and projects implemented in the region to support Central Asian researchers in the field of natural sciences, to promote the development of scientific and practical potential on the issues of natural resources management in the countries of the region, as well as to strengthen cooperation with international, regional and national scientific organizations.

List of existing Research Institutions in Central Asian countries with contacts can be found under the Annex II: water-related SRI in CA.

7.1 Research programs and projects in CA

Regional

Research project - Contribution to High Asia Runoff from Ice & Snow (CHARIS). This collaborative study assesses the role of glaciers and seasonal snow cover in the hydrology of the mountains of High Asia. This assessment is crucial to help forecast the future availability and vulnerability of water resources. Through collaboration with our Asian partners, the project is determining how much water in the rivers of High Asia comes from seasonal snow melt and how much comes from glacier ice melt. The work will provide critical regional-scale information for planning downstream irrigation, hydropower generation and general consumption. A better understanding of the current hydrologic regime will provide realistic estimates of the future availability and vulnerability of water resources in these regions.⁶¹

Partnerships for Enhanced Engagement in Research (PEER) project. The project was funded by the United States Agency for International Development (USAID) within initiative of U.S. National Academy of Sciences (NAS) and implemented by Regional Environmental Center for Central Asia in the period of December 2016 – November 2018.

This project was aimed to fill the knowledge gap about impacts of climate change through the assessment of agricultural impact on surface water quality of the Amu Darya River, with different scenarios of climate change and irrigation practices.

The results of the project were delivered to the decision-makers for elaboration of possible adaptation actions and used to facilitate a policy dialogue with both national and regional water management structures such as the Ministry of Agriculture and Water Resources of the Republic of Uzbekistan, basin water management organization (BVO) Amu Darya, Interstate Coordination Water Commission (ICWC), the Interstate Commission for Sustainable Developments (ICSD) and Executive Committee of the International Fund for Saving the Aral Sea (EC IFAS).

⁶¹ National Snow and Ice Data Center/ CHARIS/ Project Summary: <http://nsidc.org/charis/project-summary/> (was available 15/01/19)

7.2 Conferences

International

International Symposium on Water and Land Resources in Central Asia. From 9th to 11th October, 2018 the “International Symposium on Water and Land Resources in Central Asia” took place in Almaty, Kazakhstan. The scientific conference was organized in the framework of the “Central Asia Water” (CAWa) project.

One hundred sixty-seven participants from eighteen countries attended the conference, which served as an excellent platform to bridge scientific activities of international and regional researchers. During the three days’ event, seven scientific sessions covering traditional geoscientific disciplines, such as climatology, glaciology and hydrology as well as socio-economically relevant topics, such as environmental risk, natural resource management and capacity development, were organized. Both experienced and early career researchers took the chance, to communicate their results in form of oral and poster presentations. The interdisciplinary symposium offered an outstanding environment to present recent scientific achievements and to discuss various aspects of water and land resource management in Central Asia.⁶²

Central Asian International Scientific-Practical Conference “The 25 years of Water Cooperation in Central Asia: Achievements, Lessons Learnt and Future Outlook» took place on 23-24 November 2017, in Tashkent, Uzbekistan on the occasion of the 25-year long activity of ICWC in the area of interstate water cooperation in Central Asia. The Conference was supported by several international organizations: GIZ, SDC, USAID, OSCE, ADB, UNDP and Agency GEF of IFAS.

The Conference consisted of three plenary sessions and several parallel round tables:

- Transboundary water cooperation as an important driver of food, energy, and environmental security in Central Asia
- Integrated water resources management as a tool for ‘green growth’ and adaptation to climate change
- Special session: Encouraging young water professionals to address the water use related issues
- Improving legal framework of water cooperation and promoting water diplomacy as a prerequisite for good neighborly relationship between the Central Asian countries
- Enhancement of water education and professional development as well as improvement of regional and national training activities in Central Asia
- Financial and economic mechanisms of water management and use
- Water and ecology.⁶³

Central Asian International Environmental Forum. First Central Asian Environmental Forum titled “Climate Change and Water Cooperation in the context of Sustainable Development in Central Asia” was held on June 5-7, 2017, in Ashgabat. During the forum, participants discussed

⁶² CAWa/ International Symposium on Water and Land Resources in Central Asia: <https://www.cawa-project.net/ru/news-detail/news/international-symposium-on-water-and-land-resources-in-central-asia-held-in-almaty-from-9th-to-11th-1/> (was available 15/01/19)

⁶³ ICWC/ Events/ The Central Asian International Scientific-Practical Conference “The 25 years of Water Cooperation in Central Asia: Achievements, Lessons Learnt and Future Outlook”: http://www.icw-ara.uz/25years/index_e.htm (was available 15/01/19)

the challenges and opportunities for cooperation in the field of water resources management, climate change, ways to harmonize the legal framework on environmental issues.⁶⁴

The second forum with the theme “Strengthening Cooperation on Environment and Sustainable Development in Central Asia” took place on June 5-8, 2018, in Tashkent, Uzbekistan. Its aim was to contribute to strengthening the dialogue among the government agencies, academia, the international community for development, civil society and business structures in Central Asia on environmental issues and the formation of joint solutions for sustainable development of the region.⁶⁵

Thematic areas included:

- Conservation of biodiversity and development of a network of protected natural areas
- Renewable energy sources and energy efficiency;
- Integrated management of solid domestic waste;

International Conference “Development of cooperation in the Aral Sea Basin to mitigate consequences of the environmental catastrophe” took place on October 28-29, 2014, in the city of Urgench, Uzbekistan. The event aimed to mobilize the efforts of the world community to implement programs and projects dedicated to improving the environmental and socio-economic situation in the region of the Aral Sea and to boost the international cooperation to weather the negative repercussions of the ecological disaster.⁶⁶

The gathered at the event were demonstrated a video film narrating the problems associated with the unfolding situation in the basin of the Aral Sea as well as those concerning the realization of region-wide projects.

During panel sessions of the conference, participants discussed adopting additional measures to preserve the gene pool and boost the health of the population residing in the environmental risk zone, mobilizing necessary economic stimuli and mechanisms for bolstering the living standards and quality in the Aral area, restoring the ecological system and the biodiversity in the region.

Conference on Water Resources of Central Asia and their Use. International Scientific Conference was held on 22-23 September 2016 in Almaty, Kazakhstan and devoted to summarizing results of the United Nations Decade for Action “Water for Life”. The event was organized by the Ministry of Agriculture and Ministry of Education and Science of the Republic of Kazakhstan, Kazakh National Research Technical University jointly with the Institute of Geography of Kazakhstan, supported by the Swiss Federal Department of Foreign Affairs, as well as UNESCO Almaty Cluster Office and UNESCO International Hydrological Programme (UNESCO IHP).⁶⁷

⁶⁴ The Regional Environmental Centre for Central Asia/ Activities/ Cross-program activities/ Central Asian Environmental Forum: <https://carececo.org/en/main/activity/cross-program-activities/tsentralno-aziatskiy-mezhdunarodnyy-ekologicheskiy-forum-/> (was available 15/01/19)

⁶⁵ The Regional Environmental Centre for Central Asia/ Activity/ Forum: <https://carececo.org/en/main/activity/forum/> (was available 15/01/19)

⁶⁶ ICWC/ Events/ International Conference “Development of cooperation in the Aral Sea Basin to mitigate consequences of the environmental catastrophe”: <http://www.icwc-aral.uz/aralconf2014-report.htm> (was available 15/01/19)

⁶⁷ Home/ All News/ Water Resources of Central Asia and Their Use Conference Summarized: <https://en.unesco.org/news/water-resources-central-asia-and-their-use-conference-summarized> (was available 15/01/19)

The Conference programme consisted of the High-Level Round Table and a number of thematic sessions, including:

- Geographic information systems and mathematical modeling;
- Water resources of Central Asia in the context of climate change;
- Water resources management: principles, methods, results;
- Hydrological extremes;
- Transboundary surface and groundwater cooperation.

UNESCO and its partners made a significant contribution to the programme of the event, including participation in the High-Level Round Table, presentation of IHP activities at the plenary session, chairing the Session on transboundary water cooperation, as well as a number of interventions at various thematic sessions.

7.3 Development projects

Regional

Aral Sea Basin Programs. World community recognized the environmental crisis in the Aral Sea Basin as the largest environmental disaster of the last century resulting in severe socio-economic consequences for the population of the sub region inhabited by over 50 million people. In 1994, the Heads of the Central Asian States adopted the first “Aral Sea Basin Program” (ASBP-1). Due to the water-management focus of the ASBP-1 and certain issues with cross-sectoral coordination, it soon became obvious that there is a need for a new approach to planning and implementation of these activities in the region.

Development of the first Program was initiated in 1992, with the active participation of the World Bank, UNDP and UNEP. The main goals of the Program included:

- stabilizing the environment in the Aral Sea Basin
- restoring the affected environment of the Aral Sea Region
- improving management of water and land resources in the Basin
- creating management structures at all levels for planning and implementation of the Program.⁶⁸

Throughout the years, ASBP has been revitalized twice with new approaches and strategies. Three programs were implemented in total: ASBP (1994-2002), ASBP-1 (2003-2010) and ASBP-3 (2011-2015). And on 16 May 2018, the first meeting of the Regional Working Group on the development of a new Action Program to ASBP-4 took place. The meeting was organized by the EC IFAS with the support from the EU-funded project “Central Asia Nexus Dialogue: Fostering Water, Energy and Food Security Nexus Dialogue and Multi-Sector Investment (Nexus Project)” and the GIZ Regional Program "Transboundary Water Resources Management in Central Asia". The new ASBP-4 will be finalized in 2019.⁶⁹

Kyrgyzstan.

Sustainable development of Issyk-Kul: GIS and inventory of WSS assets. This project is designed to create digital maps of three Issyk-Kul cities and a database of their water supply and

⁶⁸ The Executive Board of the International Fund for saving the Aral Sea in the Republic of Kazakhstan/ IFAS/ The Aral sea basin programs: <http://kazaral.org/en/ifas/asbp/> (was available 15/01/19)

⁶⁹ CAREC/ News/ The first meeting of the Regional Working Group on the development of a new Action Program to assist the countries of the Aral Sea Basin: [https://carececo.org/en/main/news/RWG-ASBP-4/\(was available 15/01/19\)](https://carececo.org/en/main/news/RWG-ASBP-4/(was available 15/01/19))

sewerage systems. The developed geographic information system helps to manage effectively the water supply, sewerage and other urban services systems in the towns of Balykchi, Cholpon-Ata and Karakol, reducing the negative impact of urban development on the environment of the Issyk-Kul Biosphere Reserve.

The main goal is creation of a geo-information system and assets inventory of the water supply and sewage systems in the Issyk-Kul towns of Balykchi, Cholpon-Ata and Karakol.

Outcomes from the project included:

- Conducted GPS survey of reference control points for three Issyk-Kul towns. According to the survey data, geo referencing of acquired high-resolution space images with orthorectification was performed, geo referencing of topographic and cadastral maps of the scale 1: 2000 was carried out.
- Developed and implemented a model and database structure on the PostgreSQL DBMS.
- Carried out vectorization of topographic and cadastral maps on 13 layers, and their content was filled with attributive information.
- Conducted geodetic surveying of all the assets of the water supply and sewerage system for these towns, their vectorization was performed on 21 layers, and completed an inventory of assets and registering of data in the database.
- Organized remote Web-GIS-access to the database.
- Developed a management program for geo information system and a WSS GIS database based on the Quantum GIS libraries.
- Conducted multistage training of specialists of Vodokanal and Urban Architectural entities on working with the developed system. A user manual on 146 pages was prepared.

7.4 Networks and platforms for research in CA

Networks

Regional Network of Water (Basin) Organizations from Eastern Europe, Caucasus and Central Asia (NWO EECCA). NWO EECCA is an independent, non-profit, non-partisan international network of water organizations, part of International Network of Basin Organizations (INBO) is operates since 2010. The goal of the network to develop the integrated water resources management and create conditions for comprehensive and environmentally friendly rational use of water and reclaimed land.⁷⁰

Network objectives - based on the goal, NWO EECCA focuses on:

- Establishing ties among organizations interested in the Network goal and promoting exchange of experience and expertise among Network's members;
- Providing assistance in exchanging and disseminating information on water and land reclamation;
- Providing access to national, regional and international databases on water and land reclamation by using existing frameworks and tools;
- Facilitating education, professional training, and internships in field of water and land reclamation, with particular focus on incorporation of these fields into general education;

⁷⁰ NWO EECCA/ Home/Charter: <http://www.eecca-water.net/content/view/1150/77/lang.english/> (was available 15/01/19)

- Organizing events in order to attract attention of managers at various levels and the public to water-related and land reclamation issues;
- Developing international and regional (including, scientific) programs, conducting search for donors and implements them;
- Promoting public participation in decision-making on transboundary, basin water issues;
- Initiating discussions on transboundary water issues and policies related to efficient water use and promoting dialogues among governmental, non-governmental community organizations and other stakeholders;
- Contributing to the development of regional cooperation among governmental, public agencies and non-governmental organizations in area of integrated water resources management and improved irrigated agriculture;
- Popularizing measures to prevent negative anthropogenic impact on water bodies.

Regional Research Network “Water in Central Asia” – CAWa. The CAWa project was launched in 2003 and is funded by the German Federal Foreign Office. It is part of the German Water Initiative for Central Asia (the so-called "Berlin process") The CAWa project aims to provide a sound scientific basis for trans-national water resources management in CA. The planned research activities involve a network of scientific institutions across CA. They will produce joint scientific results as well as pass down up-to-date scientific methods and approaches.

Within CAWa, up-to-date hydro-meteorological stations equipped with sophisticated sensors will be installed in CA. The stations will send their data via real-time satellite communication to the operation center of the monitoring network and to the participating National Hydro-meteorological Services. The hydro-meteorological data provided by the new stations, the data from remote sensing and GNSS as well as the results of the scientific studies will be accessible to all partners via internet and be published in international journals. Thus, CAWa will contribute to a reliable data basis on water resources in Central Asia. In addition, the methods and experiences gained in CAWa will be passed to CA professionals from science and administration in training courses and used for the development of curricula in universities and other institutions of tertiary education.⁷¹

CAWa’s activities are divided into four work packages:

- SDSS - Hydrometeorological Observations and Sensor Data Storage⁷²
- Snow cover monitoring and seasonal runoff forecast⁷³
- WUEMoCA - Water Use Efficiency Monitor in Central Asia⁷⁴
- Capacity Building⁷⁵

Water related UNESCO Chairs in Central Asia

UNESCO Chair on Water Resources Management in Central Asia was established in 2016 at the German-Kazakh University. UNESCO Chair on Water Diplomacy, Water Resources Management and Environmental Protection was established in 2018 at the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers⁷⁶ Through this network, higher education and research institutions all over the globe pool their resources, both human and material, to address

⁷¹ CAWa/ Portrait: <https://www.cawa-project.net/portrait/> (was available 15/01/19)

⁷² CAWa/ Research/ WP1: <https://www.cawa-project.net/research/wp-1/> (was available 15/01/19)

⁷³ CAWa/ Research/ WP2: <https://www.cawa-project.net/research/wp-2/> (was available 15/01/19)

⁷⁴ CAWa/ Research/ WP3: <https://www.cawa-project.net/research/wp-3/> (was available 15/01/19)

⁷⁵ CAWa/ Research/ WP4: <https://www.cawa-project.net/research/wp-4/> (was available 15/01/19)

⁷⁶ UNESCO/Waer Security/Water-related UNESCO Chairs: <https://en.unesco.org/themes/water-security/chairs> (was available 15/01/19)

pressing challenges and contribute to the development of their societies⁷⁷. This network creates the opportunities for all partners the joined projects, workshop and summer school for students is the good achievements of this collaboration for the past years.

UNESCO International Hydrological Program

The UNESCO International Hydrological Programme (IHP) is the only intergovernmental programme of the UN system devoted to water research, water resources management, and education and capacity building. UNESCO-IHP's work in the water sector is built on three tracks: hydrological science for policy relevant advice; education and capacity building responding to the growing needs of sustainable development; water resources assessment and management to achieve environmental sustainability. In Central Asia Afghanistan, Kazakhstan, Kyrgyzstan and Uzbekistan has the National IHP Committees. These Committees are constituted and run under the authority of national governments and play a critical role in the implementation of the IHP. National Committee is represented by the leading scientists from the water sector. Function of the Committee is dedicated to contribute to organization and development of the scientific research and practical implementation of the UNESCO International Hydrological Program's priorities. Kazakhstan become the member of the IHP Intergovernmental Council Composition for the period 2015-2019. The agreement of establishing the first Central Asian Regional glaciological centre under the auspices of UNESCO in Kazakhstan was signed by the Government the Republic of Kazakhstan and UNESCO.

Platforms

Central Asian Journal of Water Research (CAJWR) was established in 2015 by the Kazakh-German University and supported by World Bank CAWDEP Project, OSCE, and Regional Environmental Center for Central Asia (CAREC). It is a bi-lingual (English-Russian), open-access, peer-reviewed e-Journal dedicated to all aspects of water management in the region of Central Asia. CAJWR seeks to reach all scientists working in the areas of water related research and familiarize them with each other's achievements across the region, not limiting its range to the national audience. It aims at strengthening the existing networks to support creation of the regional scientific community with the goal of developing scientific research throughout the region.⁷⁸

The Journal welcomes articles in the following research areas:

- Economic & financial mechanisms
- Climate and environment
- Hydro technical facilities
- Water Governance
- Capacity development
- Food security
- Drinking water and sanitation

Interactive map on water sector professional development in Central Asian countries.

Interactive resource accumulates the key information on organizations dealing with the water sector professional development in CA. In this interactive map, an organization dealing with the issues of professional development is understood as an independent legal entity or structural unit

⁷⁷ UNESCO/ UNITWIN/UNESCO Chairs Programme: <https://en.unesco.org/unitwin-unesco-chairs-programme> (was available 15/01/19)

⁷⁸ CAJWR/ About the Journal: [https://www.water-ca.org/about\(was available 15/01/19\)](https://www.water-ca.org/about(was available 15/01/19))

of the ministry, department or any other governmental or non-governmental organization (including education entity), which specializes in professional development of water sector staff. Such organizations may be established as specialized professional development centers or may conduct training on the basis of existing organizations.⁷⁹

Organizations (and their affiliated centers) included into the database are grouped into 6 categories:

- Higher education institutions
- Research and design institutes
- Water agencies
- Non-governmental organizations (NGOs)
- Institutes for competence development of public employees
- Others

Portal of knowledge about water resources and ecology of Central Asia - CAWater-Info. The first knowledge portal in CA focuses on information on water and land resources and environmental problems of the Aral Sea basin. The portal was created within the CAREWIB project (Central Asia Regional Water Information Base), which is funded by the Swiss Agency for Development and Cooperation and implemented by SIC ICWC together with UNECE and UNEP / GRID-Arendal and five national water organizations of Central Asia.

Directions of development of the portal:⁸⁰

- Tools / Decision Support:
 - Knowledge base: Electronic library; Thematic knowledge bases; Glossary; Bibliographic database; Reviews
 - Database: CAREWIB Regional IS; Operational data on water intakes of BWO Amu Darya and Syr Darya; database on the Aral Sea; Analysis of the water situation of the Amudarya and Syrdarya river basins; Atlas of Water; "Who is who in the water industry"
- Strengthen regional cooperation:
 - ICWC and its executive bodies, EC IFAS, national water management organizations (section in 5 national languages of the region), cooperation with Afghanistan, network "Gender and water in Central Asia"
- IWRM:
 - projects "IWRM-Fergana", "UCC-Water", "Increasing the productivity of water and land", "Project of support of agricultural enterprises (RESP2)"
- Changing of the climate:
 - project "Dialogue on water and climate: a study of the Aral Sea basin"
- Community "Water World":
 - World Water Council, International Network of Basin Organizations, Asian-Pacific Water Forum, International Commission on Irrigation and Drainage, International Water Bureau, World Water Forums, Clean Water Territory, Russian-speaking network of water management organizations.

⁷⁹ Interactive map on water sector professional development in Central Asian countries:

<http://www.riverbp.net/education/map-learning-centers/en> (was available 15/01/19)

⁸⁰ Сеть водохозяйственных организаций стран Восточной Европы, Кавказа и Центральной Азии (СВО БЕКЦА): http://www.eecca-water.net/file/presentation_beglov_1.pdf (was available 15/01/19)

Annex I: List of Higher Education Institutions in Central Asia with contacts

Afghanistan					
#	University	Contacts	Water-related disciplines		
			Bachelor	Master	Doctorate
1	Kabul Polytechnic University	Bagh-e-Bala, Fifth Districts, Kabul, Afghanistan Chancellor of Kabul Polytechnic University: Phone: +93744340044 E-mail : chancellor@kpu.edu.af tahrerat@kpu.edu.af	- Hydrotechnical Constructions		
2	Kabul University	Chancellor Office Email: info@ku.edu.af Phone: +93 (0) 202500326 Foreign Relations and Cultural Affairs Email: international@ku.edu.af Phone: +93(0)202500271	The Faculty of Engineering has five departments: Mechanical engineering department, Electrical & electronics engineering department, Architectural department, Energy engineering department and Civil engineering department. The Faculty of Agriculture has six departments: Agronomy Department, Economics and Agricultural Extension Department, Forestry & Natural Resources Department, Department of Soil Science and Irrigation, Horticulture Department, and Plant Protection Department		
Turkmenistan					
#	University	Contacts	Water-related directions		
1	Turkmen Agricultural University Named after S. A. Niyazov	744012, Turkmenistan, Ashgabat, 143, 2009 st. (Gerogly)	- Hydromelioration - Hydrotechnical construction		
2	Turkmen State Institute of Architecture and Construction	744025, Turkmenistan, Ashgabat, 1916th Street, 136. Tel .: 28-76-00. Fax: 28-76-01, 28-75-76.	- Water supply and sanitation		

Kazakhstan					
#	University	Contacts	Water-related disciplines		
			Bachelor	Master	Doctorate
1	Kazakh National Agrarian University	8 Abai avenue, Medeu district, Almaty, 050010, Kazakhstan Rectors reception room:+7(727) 264 24 09, +7(727) 262 19 48 Chancery (Fax): +7(727) 262 11 08 e-mail: info@kaznau.kz	5B060800 Ecology 5B080400 Fisheries and commercial fisheries 5B080500 Water resources and water use 5B081000 Land improvement, restoration and protection of land	6M080400 Fisheries and commercial fisheries 6M080500 Water resources and water use 6M081000 Land improvement, restoration and protection of land 6M060800 Ecology	6D060800 Ecology 6D080500 Water resources and water use
2	Al-Farabi Kazakh National University	71 al-Farabi Ave., Almaty, Kazakhstan, 050040 Tel. 8 (727) 377-33-33, 8 (727) 377-33-30 Fax 8 (727) 377-33-44 Email: info@kaznu.kz	5B080400 Fisheries and commercial fisheries 5B061000 Hydrology 5B060800 Ecology 5B060900 Geography	6M061000 Hydrology 6M060800 Ecology 6M060900 Geography 6M091100 Geoecology and environmental management	6D080400 Fisheries and commercial fisheries 6D061000 Hydrology 6D060800 Ecology 6D060900 Geography
3	Taraz State University named by M.KH Dulati	Suleymenov street, 7 Taraz, 080012, Kazakhstan Telephone: +7 7262 453664, Fax: +7 7262 432402 Email: info@tarsu.kz	5B060800 Ecology 5B080500 Water resources and water use 5B081000 Land improvement, restoration and protection of land 5B060900 Geography	6M060800 Ecology 6M074400 Hydraulic engineering and construction 6M080500 Water resources and water use 6M081000 Land improvement, restoration and protection of land 6M091100 Geoecology and environmental management	6D074400 Hydraulic engineering and construction 6D081000 Land improvement, restoration and protection of land

4	Atyrau State University after H. Dosmukhamedov	Studencheskaya Ave., 1 Atyrau, 060011, Kazakhstan Phone: +7 (7122) 27-63-21 Fax: +7 (7122) 27-63-23 Email: kense@atgu.kz	5B060800 Ecology 5B080400 Fisheries and commercial fisheries 5B011600 Geography (education) 5B080500 Water resources and water use	6M060800 Ecology	
5	Korkyt Ata Kyzylorda State University	Kazakhstan, 120014 Kyzylorda, 29A Aitekebie str., Tel: +7 (7242) 26 17 16, fax: +7 (7242) 26 27 25, korkyt_ksu@mail.ru	5B060800 Ecology 5B060900 Geography 5B080500 Water resources and water use 5B081000 Land improvement, restoration and protection of land	6M060800 Ecology 6M080500 Water resources and water use 6M081000 Land improvement, restoration and protection of land	6D081000 Land improvement, restoration and protection of land
6	Kazakh National Research Technical University named after K.I.Satpayev	22a Satpaev str., 050013, Almaty, Kazakhstan. Call center: +7 (727) 257 71 16 Office: +7 (727) 292 60 25 info@satbayev.university	5B080500 Water resources and water use 5B060800 Ecology	6M080500 Water resources and water use 6M060800 Ecology 6M075500 Hydrogeology and Engineering Geology	6D080500 Water resources and water use 6D060800 Ecology 6D075500 Hydrogeology and Engineering Geology
7	M.Auezov South Kazakhstan State University	160012, Shymkent, Kazakhstan Tauke khan avenue, 5 Selection committee Tel.: (8-725-2) 21-38-07, (8-725-2) 21-43-67; (8-725-2) 21-19-91, (8-725-2) 21-01-41 canselyarya@mail.ru koncel@ukgu.kz, info@ukgu.kz	5B060800 Ecology 5B060900 Geography 5B080500 Water resources and water use	6M060800 Ecology	6D060800 Ecology

8	D. Serikbayev East Kazakhstan state technical university	Kazakhstan, 070004, Ust-Kamenogorsk, 69 Protozanov Street. Phone/Fax (8-72-32) 26-74-09, e-mail: kanc_ekstu@mail.ru	5B080500 Water resources and water use		
9	Kazakh Leading Architectural and Civil Engineering Academy (KAZGASA)	28, Ryskulbekov street, Almaty, Kazakhstan, 050043 E-mail: info@kazgasa.kz, info@mok.kz Office of the First Pro-Rector: Telephone: +7 (727) 220-80-76 E-mail: f.abdillayeva@kazgasa.kz Administration Telephone: (727) 220-80-93 E-mail: info@kazgasa.kz	5B072903 Hydrotechnical Construction 5B075200 Water supply and sanitation		
Kyrgyzstan					
#	University	Contacts	Water-related disciplines		
			Bachelor	Master	Doctorate
1	Kyrgyz-Russian Slavic University	720000, Bishkek, Kyrgyzstan Kiyevskaya street, 44 Tel.: + (996-312) 66-25-67, 43-11-69 Fax: + (996-312) 43-11-69, 43-11-71 E-mail: krsu@krsu.edu.kg	520600 Hydrometeorology 750500 Construction: - Hydraulic engineering - Water supply and sanitation 760100 Environmental management and water use: - Integrated use and protection of water resources		

2	Kyrgyz National University	720033, Bishkek, Kyrgyz Republic Frunze street, 547 Tel.: 32-33-94, 32-32-21, 32-33-94 Email: rector@university.kg oo@university.kg	520600 Hydrometeorology 520800 Ecology and environmental management 610200 Agronomy 610700 Fisheries 750500 Construction: - Hydraulic engineering 760100 Environmental management and water use	520800 Ecology and environmental management	
3	Kyrgyz National Agrarian University named after K.I. Skryabin	68, Mederov str. 720005, Bishkek, Kyrgyz Republic Phone: +996 (312) 54-52-10, 54-05-48 Fax: +996 (312) 54-05-45 E-mail: knau-info@mail.ru www.knau.kg	610200 Agronomy 760100 Environmental management and water use: - Land improvement, restoration and protection of land - Agricultural water supply systems 750500 Hydraulic engineering 610700 Fisheries 520800 Ecology and environmental management	520800 Ecology and environmental management 610200 Agronomy 760100 Environmental management and water use 750500 Hydraulic engineering	
4	Kyrgyz State University of Construction, Transport and Architecture n.a. N. Isanov	720020, Bishkek Maldybayeva, 34B Tel.: +(996 312) 54-35-61, fax : +(996 312) 54-51-36 E - mail: ksucta@elcat.kg	750500 Construction: - Hydraulic engineering - Water supply and sanitation Technosphere safety: - Environmental protection and rational use of natural resources Environmental management and water use: - Integrated use and protection of water resources - Water resources and water use		

5	Kyrgyz State Technical University after I. Razzakov (KSTU)	720044 Kyrgyzstan, Bishkek, 66 Mira ave. Rector's office: +996-312-54-51-25 Fax: +996-312-54-51-62 E-mail: rector@kstu.kg	640200 Power industry and electrical equipment - Hydroelectric power 550101.03 Hydrotechnical construction	640200 Power industry and electrical equipment - Hydroelectric power	
6	Jalal-Abad State University	57 Lenin Street, Jalal-Abad Kyrgyz Republic, 715600 Email: admin@jasu.edu.kg Tel.: +996-3722-50333	550101.03 Hydrotechnical Construction		
7	American University of Central Asia	7/6 AalyTokombaev Street Bishkek, Kyrgyz Republic 720060 Tel.: +996 (312) 915000 Fax: +996 (312) 915 028	Environmental Management and Sustainable Development: https://www.auca.kg/en/p3191/		
Tajikistan					
#	University	Contacts	Water-related disciplines		
			Bachelor	Master	Doctorate
1	Tajik Agrarian University	734003, Dushanbe, Rudakiave. 146 Tel./Fax: (992-372) 24 72-07 E-mail: rectortau31@mail. ru URL: www.tajagroun.tj	1-740501 Land improvement and water management (Bachelor) 1-740501 2602 Land improvement and water management (Land engineer and water management manager) 1-70040101 Hydraulic engineering 1-70050105 Rational use and protection of water resources 1-740303 Industrial fisheries		

2	Tajik Technical University named after academic M.S.Osimi	10 ac. Rajabovho street, 734042, Dushanbe, Republic of Tajikistan +(992) -37-221-35-11 +(992)-37-221-71-35 Email: ttu@ttu.tj	1-70040301 - Water supply systems 1-70040304 - Rational use and protection of water resources 70040103 - Construction and operation of hydroelectric power plants		
3	Tajik National University	Rudaki avenue 17, 734025, Dushanbe, Republic of Tajikistan Tel .: (+992 37) 2216225, (+992 37) 2217422	1-51010103 Hydrogeology and Engineering Geology 1-51010110 Hydrology and glaciers		6D061000 Hydrology 6D075500 Hydrogeology and Engineering Geology 6D091100 Geoecology and environmental management
4	Institute of Water problems, Hydropower and Ecology of the Academy of Sciences of the Republic of Tajikistan	14A Ayni str., 734042, Dushanbe, Republic of Tajikistan Phone: (+992 37) 2222320 (+992 37) 2222321 E-mail: owp@tojikiston.com, kobuliev@mail.ru		1M-310201-0203 Land Hydrology 1M-700401 Water-related Construction 1M-70040101 Hydraulic engineering 1M-70040303 - Purification of natural and waste water 1M-70040304 - Rational use and protection of water resources	6D061000 Hydrology 6D074400 - Hydraulic Engineering and Facilities
Uzbekistan					
#	University	Contacts	Water-related disciplines		
			Bachelor	Master	Doctorate
1	National University of Uzbekistan named after MirzoUlugbek	100174, Tashkent, Uzbekistan 4 University Avenue, Tel.: (0 371) 246-75-31 Fax: (0 371) 227-15-43 e-mail rector@nuu.uz	Hydrology Hydrometeorology	Hydrology Hydrometeorology	Land Hydrology Water Resources Hydrochemistry

2	Tashkent Institute of Irrigation and Agricultural Mechanization Engineers	Tashkent, Kori Niyoziy str., 39 +(99871) 237-46-68 admin@tiiame.uz; tosh.imi@agro.uz	5141100 Hydrology (in reservoirs) 5340700 Hydrotechnical construction 5450100 Use of water energy in irrigation systems 5450200 Water management and melioration 5450300 Mechanization of water management and reclamation works 5450400 Operation of hydraulic structures and pumping stations 5450500 Meliorative hydrogeology 5141700 Hydrology of rivers and reservoirs (2018-2019) 5630200 Environmental safety in water management (2018-2019)		Structured doctoral programme on Sustainable Agricultural Development in Central Asia: https://www.iamo.de/en/research/projects/details/susadica/
3	Tashkent Institute of Architecture and Civil Engineering	Tashkent city, Navoi street, 13, E-mail: devon@taqi.uz Phone: +998 71 235-43-30	5340700 Hydrotechnical construction		
4	Tashkent State Technical University named after Islam Karimov	Tashkent city, University street 2 Email: tstu_info@tdtu.uz Phone: +99871 2464600	5311800 Hydrogeology and Engineering Geology 5312400 - Alternative energy sources (by types)	5A310101 - Hydroelectric power stations and renewable energy sources	

Annex I.II: Regional Universities / University programs

#	University	Contacts	Water-related disciplines		
			Bachelor	Master	Doctorate
1	University of Central Asia (UCA)	<p>Central Administration Office: 138 Toktogul Street, Bishkek, 720001, Kyrgyz Republic Tel.: +996 (0) 312 910 822 Fax: +996 (0) 312 910 835 info@ucentralasia.org</p> <p>Naryn Campus 310 Lenin Street, Naryn, 722918, Kyrgyz Republic Tel: + 996 (3522) 57 820</p> <p>Khorog Campus 155 QimatshoImatshoev Street, Khorog, GBAO, 736000, Republic of Tajikistan Tel: +992 4464 08 220</p>	Earth and Environmental Sciences		
2	Kazakh-German University	<p>050010 Pushkin street 111 Almaty, Kazakhstan +7 727 355-05-51 +7 727 355-05-52 — fax info@dku.kz</p>		6M050500 Regional studies: Integrated Water Resource Management	

Annex II: List of water-related Science and Research Institutions in Central Asia with contacts

Kazakhstan				
#	Science and Research Institutions	Contacts	Description	Activities
1	Ahmedsafin Institute of Hydrogeology and Environmental Geoscience	050010, Almaty, Kazakhstan Kabanbaibatyr str. 69 // 94, Telephone: (727) 291 46 86, Fax: (727) 291 88 25, E-mail: 8 (727) 291 46 86 hydrogeology.kz@mail.ru aigul_igg@mail.ru	The Institute of Hydrogeology and Geoecology is the only scientific organization of the Republic of Kazakhstan in the field of addressing fundamental and applied problems of hydrogeology, geoecology and rational integrated use of water resources of the Republic of Kazakhstan.	Objective of the Institute activities: To increase the level of economic efficiency and ecological stability of groundwater in Kazakhstan. The Institute conducts major fundamental and regional applied research in the field of establishing patterns of formation and placement of various types of groundwater, identifying significant groundwater resources, developing new methods for their assessment, hydrogeological stratification and mapping, forecasting of technogenic hydrogeological processes using modern methods of chemical water analysis, modeling and the latest computer and GIS technologies.
2	Institute of Geography of the Republic of Kazakhstan	Republic of Kazakhstan, 050010, Almaty, Phone.: (+7) 727 291-81-29, 291-88-69 Fax: (+7) 727 291-81-02 E-mail: ingeo_2009@mail.ru www.ingeo.kz	The Institute of Geography is one of the oldest research centers of academic specialization in Kazakhstan and the only Scientific Research Institute of geographical specialization in the Central Asian region.	The researches of the Institute are aimed at solving environmental problems and assessment of natural-resource potential of the country's geosystems with the development of geographical bases of sustainable nature management.

3	Kazakh Scientific Research Institute of Water Economy (KazSRIWE)	Kazakhstan, 080003, Taraz, Koigeldy St. 12 Tel.: 8 (7262) 425540, 8 (7262) 426071 8 (7262)525333 E-mail: kiwr-t@mail.ru, IWRE@bk.ru	The Kazakh Scientific Research Institute of Water Economy (KazSRIWE) is one of the leading scientific organizations in the field of water management, melioration, and its technologies, agricultural water supply and pasture and water economy in the Republic of Kazakhstan.	<ul style="list-style-type: none"> - Development of methodology and identification of ways of steady melioration and water economy; - development and introduction of resource-saving technologies and technical facilities in irrigated agriculture; - development and introduction of resource-saving technologies in melioration of irrigated lands; - secure the reliability of agricultural water supply and irrigated pastures - to achieve integrated water resources management in automating water distribution; - to improve organizational method of water supply in economic sectors based on international standards; - achieving water facilities' security; - transfer of progressive foreign technologies and personnel support; - international cooperation with leading international centers; - staff training, internships for employees in leading scientific intuitions.
4	Institute of Natural Resources of German-Kazakh University	Republic of Kazakhstan, Almaty, Nazarbayev Ave.,173 Tel: +7(727) 355-0551 Email: nri@dku.kz	UNESCO Chair on water resources management in Central Asia. The main goal of the Institute is to support Central Asian researchers in the field of natural sciences, to promote the development of scientific and practical potential on the issues of natural resources management in the countries of the region, as well as to strengthen cooperation with international, regional and national scientific organizations.	<ul style="list-style-type: none"> - Creation of platforms for scientific research in the field of natural resources and maintenance of a scientific and professional network (teachers, young researchers, experts and graduates of the Master program "Integrated Water Resources Management"); - Study of issues of regional cooperation of the Republic of Kazakhstan, Central Asia, and foreign countries; - Organization and holding of scientific conferences, roundtables, seminars, master classes in water management (WRM), including political, socio-economic, environmental, geographic information and technical aspects; - Improving the qualifications of teachers of higher educational institutions, industrial specialists and government representatives through training with the involvement of international and regional experts in the field of water resources management; - Issue of scientific publications based on the Central Asian Electronic Journal of Water Research (CAJWR)

5	Kazakh Research Institute of Fishery	Kazakhstan, 050016, Almaty, Suyunbai Avenue 89 «A» Tel/fax : 8 (727) 383-17-15 Email: kazniirh@mail.ru, mail@kazniirh.kz	KazNIIRH Mission - Save and enhance fisheries resources of the Republic of Kazakhstan and to open new possibilities of their use.	- Applied research in the field of fisheries for the conservation and restoration of fish resources and other aquatic organisms in the water bodies of international and republican significance Republic of Kazakhstan - Development of effective commercial fish farming technologies in the Republic of Kazakhstan
Kyrgyzstan				
	Science and Research Institutions	Contacts	Description	Activities
1	Institute of Water Problems and Hydropower of the National Academy of Sciences of the Kyrgyz Republic	Bishkek, 720033, Frunze str., 533 Tel .: 996 312 32-37-27; Fax: 996 312 32-39-28 Email: iwp@istc.kg	Its activities are focused on fundamental and applied research in the field of rational use of water and water-energy potential, which are of priority importance for the economic development of Kyrgyzstan and other Central Asian countries.	- study of patterns of formation, mode, distribution, protection of surface and groundwater, their assessment and interaction; - development of scientific bases and practical recommendations for the rational use of water and hydropower resources of internal and transboundary river basins, optimization of operating regimes of integrated water management systems; - creation of information support systems for water and land management; - mathematical-cartographic modeling of natural processes; - monitoring of highland lakes; monitoring of water and snow-ice resources of Kyrgyzstan; - and other.
2	Central-Asian Institute for Applied Geosciences (CAIAG)	Kyrgyz Republic, 720027 Bishkek Timur Frunze Rd.73/2 Tel.: +996 312 555111 Fax: +996 312 555222 Email: caiag@caiag.kg	The Central Asian Institute of Applied Geosciences is carrying out multi-disciplinary research on societal relevant problems like Natural Disaster Risk Reduction, Water Management and Adaption to Climate Change in Central Asia and thereby provide scientifically sound support to decision makers and the Central Asian societies.	The research is conducted in the following areas: geodynamics and geo hazards; climate, water and geo-ecology; usage and protection of resources. Attention is paid to creation of technical infrastructure and information management, education, training and professional qualification of the researchers.

3	Mountain Societies Research Institute University of Central Asia (MSRI)	138 Toktogul Street 720001 Bishkek, Kyrgyz Republic Email: msri@ucentralasia.org Tel.: +996 (0) 312 910 822 Fax: +996 (0) 312 910 835	The Graduate School of Development's Mountain Societies Research Institute (MSRI) conducts research for development with the goal to improve the well-being of mountain societies in Central Asia.	MSRI has five objectives: <ul style="list-style-type: none"> - To generate knowledge on mountain societies through original scientific research; - To serve as a knowledge hub for scholars, development practitioners, and policy makers; - To enhance regional capacity to conduct sound research relevant to mountain societies; - To inform policy and practice through engagement with key development partners; - To disseminate knowledge among mountain stakeholders, including the co-development and co-teaching of UCA's academic programmes.
4	Kyrgyz Research Irrigation Institute	Kyrgyz National Agrarian University named after K. I. Skryabin 68, Mederov str. 720005, Bishkek, Kyrgyzstan Phone: +996 (312) 54-52-10, 54-05-48 Fax: +996 (312) 54-05-45 E-mail: knau-info@mail.ru	The Institute provides research and development in the framework of the main problems of hydropower, land reclamation and water management.	Institute has 8 laboratories that conduct research on two scientific directions: <ol style="list-style-type: none"> 1. Land reclamation and irrigation: laboratory of reclamation hydrogeology and water issues, laboratory of melioration and ecology of irrigated lands, laboratory of irrigation and soil erosion research, laboratory of desertification and rural poverty, laboratory of monitoring of surface water quality. 2. Technical and information support: laboratory of software and hardware for automation of water accounting and water distribution, laboratory of information and mapping systems and databases, laboratory of water supply and agricultural water supply.

Tajikistan				
	Science and Research Institutions	Contacts	Description	Activities
1	Institute of Water problems, Hydropower and Ecology of the Academy of Sciences of the Republic of Tajikistan	14A Ayni str., 734042, Dushanbe, Republic of Tajikistan Phone: (+992 37) 2222320 (+992 37) 2222321 E-mail: owp@tojikiston.com, kobuliev@mail.ru	Currently, the institute has six laboratories: - water resources and hydro-physical processes; - environment and sustainable development; - power engineering, and resource-saving; - climatology and glaciology; - water quality, hydro and biogeochemistry; - modeling and information management.	The main areas of research associated with the analysis of the state and prospects of the general power energy and hydropower of Tajikistan are: - Study of Renewable Resources of Energy engineering of Tajikistan; - Resource inventory and assessment of the possibilities of using them by category; - Study of Small Hydropower engineering in Tajikistan; - Analysis of water and energy resources and their variability.
2	Tajik Research Institute of Hydrotechnics and Land Reclamation	734 064, Dushanbe, Shamsi street 5/1 (+992) 918-62-30-18 taj.niigim@gmail.com	Thematic areas: - Environmental issues in the water sector - Integrated Water Resource Management - Land reclamation and irrigated agriculture - Water saving and water accounting - Any other water-related issues	Main directions: - Implementation of scientific and technical programs for water conservation, energy conservation and reclamation ecology; - Development of regulatory materials on the effective management of water resources and the sustainable development of the national economy of Tajikistan; - Training of highly qualified industry specialists through postgraduate and doctoral studies; • Creation of an information system that allows to continuously assess and predict the efficiency of water use; - Creation of regional and national water information systems

Turkmenistan				
#	Science and Research Institutions	Contacts	Description	Activities
1	National Institute of Deserts of the Academy of Sciences of Turkmenistan	744000, Ashkhabad, 15, Bitarap Turkmenistan str. E-mail: desert@online.tm	The activity of the National institute of deserts, flora and fauna of the Ministry of nature protection of Turkmenistan aimed at the implementation of fundamental and applied researches on problems of biology, ecology, human environment and rational nature use with regard for peculiarities of functioning of arid ecosystem.	Among others: - Study of desertification processes and development of complex activities on the rational use of land water resources; - Development of technology of restoration and improvement of degraded forests pastures lands and creation of forest-gardens of perspective plants species; - Implementation of state order on the observation environment pollution, information of government bodies and enterprises on their inquiries on its state; - Participation in the introduction into the production and promotion of use of the most important home and foreign achievements in the field of nature use and environment protection.
2	"Turkmensuvlyly mta slama" Institute	Beki Seytakov str.1, Ashgabat, Turkmenistan. 744000 Tel: 351835; Fax: 35 18 35 E-mail: tgvh@online.tm, ssvlechter@yahoo.com	The Institute s involved in organization, realization and using the production and science development projects on the main areas of activity of water economy of Turkmenistan: •hydraulics of irrigation canals and other water installations; •reclamation of the irrigation lands, ecology of land—improvement measures; •improvement of irrigation practices and watering technology in agriculture, developing of water-saving techniques; •practical measures for providing the population with high-quality drinking water.	The main areas of research activity: - Study and distribution of world science and production achievements in water economy, development and distribution of recommendations, guidelines, training aids - Research of the technical condition of irrigation and collector-drainage nets - Calculation of volumes of water for agricultural irrigation - Work on recommendations in accordance with improving melioration condition of irrigated lands - Formation of public opinion about rational use and protection of water resources. - With the help of high-performed techniques and air-lift, defining the quality of water for drinking and industrial needs.

Regional/International Science and Research Institutions				
#	Science and Research Institutions	Contacts	Description	Activities
1	International Water Management Institute	Central Asia Office C/o PFU CGIAR/ICARDA-CAC, Apartment No. 123, Building No. 6, Osiyo Street, Tashkent 100000, Uzbekistan Tel: +998 71 237 04 45 Fax: +998 71 237 03 17 Email: iwmi-ca@cgiar.org	IWMI's research in CA region focuses on identifying best practices for saving water, improving irrigation performance, reversing trends in land degradation and salinity, and contributing to the development of effective water resource institutions. In the past, IWMI was also active in developing transboundary dialogue on two pilot rivers shared by three states: Kyrgyzstan, Tajikistan and Uzbekistan.	<ul style="list-style-type: none"> - Water-Energy-Food-Climate-Health nexus in Central Asia - Integrated Water Resources Management in the Ferghana Valley - Water Productivity Improvement At Plot Level - Sustainable management of water resources in rural areas of Uzbekistan - others.
2	Leibniz Institute of Agricultural Development in Transition Economies (IAMO)	Dr. Nodir Djanibekov Tel.: +49 345 2928-128 djanibekov@iamo.de	The Leibniz Institute of Agricultural Development in Transition Economies (IAMO) analyses economic, social and political processes of change in the agricultural and food sector, and in rural areas. The geographic focus covers the enlarging EU, transition regions of Central, Eastern and South Eastern Europe, as well as Central and Eastern Asia.	<p>The scientific work of the institute is organized in five research domains:</p> <ul style="list-style-type: none"> - Policies and institutions - Natural resource use - Livelihoods in rural areas - Organisation of agriculture - Agricultural value chains
3	Scientific-Information Center of the Interstate Coordination Water Commission of the Central Asia (SIC ICWC)	Karasu-4, building 11 (in the BWO Syrdarya building, 4th floor), Tashkent, 100 187, Republic of Uzbekistan Phone: (998 71) 265 08 36 E-mail: vdukhovniy@gmail.com Director: Prof. Victor A. Dukhovny	SIC ICWC is an information and analytical body, which develops methods and approaches of prospective development, improvement of water management and ecological situation in the basin.	<ul style="list-style-type: none"> - One of the main tasks of SIC is information and publishing activities. SIC ICWC became a member of the IPTRIP network organized by the World Bank, UNDP, and FAO in 1993. In 2008, SIC became one of 24 Knowledge Hubs in the Asia-Pacific region under coordination of ADB. - Proceeding from the 21st ICWC meeting, a Training center for capacity building in the Central Asian water sector was established at SIC ICWC under support of the Canadian International Development Agency. - The special focus of SIC ICWC activity is on development and maintenance of a water and environmental knowledge portal - CAWater-Info

Annex III: List of Key partners for capacity building in Central Asia with contacts

	Partner organization	Contacts	Description	Activities
1	Executive Committee of the International Fund for saving the Aral Sea (EC IFAS)		Executive Committee is a working body of the International Fund for saving the Aral Sea, an international organization supported by the Central Asian Governments. D10EC IFAS is working for cooperation in the Region in the field of water resources and environmental management. Executive Committee is currently based in Almaty, Kazakhstan.	The mission of EC IFAS is to coordinate cooperation at national and international levels in order to use existing water resources more effectively, and to improve the environmental and socio-economic situation in the Aral Sea Basin. EC IFAS serves as a platform for a dialogue among the countries of Central Asia, as well as the international community. Main topics of the activities: Aral Sea, IWRM, Environment, Climate change, Socio-economic development, Legislation, Institutions.
1.1	EC IFAS branch in Kazakhstan	Executive Directorate of EC IFAS in Kazakhstan 040907, Kazakhstan, Almaty oblast, Karasay region, Alatau, Dostyk Str., 26 Tel: +7(727) 2986380 / 81; Fax: +7(727)2507717 Email: kz_almaty@ec-ifas.org Department of the Executive Directorate in Kyzylorda 20014, Kazakhstan, Kyzylorda, Aiteke Bi Str., 27/67 Tel: +7(724)2261358 Email: fondaral@mail.ru		- GIZ GmbH regional programme "Enhancing Economic and Environmental Welfare in the Aral Sea Region (EEWA): http://ec-ifas.waterunites-ca.org/about/activities/events/implementation-of-projects-and-programs/72-gtz-regional-project-enhancing-economic-and-environmental-welfare-in-the-aral-sea-region-eewa.html

1.2	EC IFAS branch in Kyrgyzstan	Executive Directorate of EC IFAS in Kyrgyzstan 720005, Kyrgyzstan, Bishkek, Lev Tolstoy Str., 8 Tel: +996(312)590211 / 590212 Fax: + 996(312)590213 Email: aral09@mail.ru		
1.3	EC IFAS branch in Tajikistan	EC IFAS branch in Tajikistan 734025, Tajikistan, Dushanbe, Shevchenko Str., 47 Tel: +992(372)277963 Tel/fax: +992(372)278532 Email: tfec-ifas@mail.ru		
1.4	EC IFAS branch in Turkmenistan	Dashoguz branch of EC IFAS in Turkmenistan Postal address: 74630, Turkmenistan, Dashoguz, 10 yilAbadanlyk Str., 11 Tel: +993(32)255315 / 253364 / 253770 Fax: +993(32)259715 Email: dashoguzaral@mail.ru		

1.5	EC IFAS branch in Uzbekistan	<p>ASBP projects implementation agency in Uzbekistan 100070, Uzbekistan, Tashkent, Rustaveli Str., 15 Tel: +998(71)2553934 / 2540847; Fax: +998(71)2550249 Email: ifas_undp@mail.ru</p> <p>Nukus branch of EC IFAS in Uzbekistan Postal address: 230100, Uzbekistan, Karakalpakstan, Nukus, DoslykGuzary Ave., 111 Tel: +998(612)228940; Fax: +998(612)229096</p>		
2	Interstate Commission for Water Coordination of Central Asia (ICWC)	CA Ministers of water resources	ICWC, represented by five Ministers of water resources or by their prime deputies at par, is the body of five governments, which entrusted direct functions of water resources management and development and maintenance of sustainable natural and hydro ecological processes on transboundary water resources to the Ministries (State Committees, Departments) of Water Resources.	<p>Main directions of ICWC and its executive bodies' practical work is:</p> <ul style="list-style-type: none"> - River basin management. - Non-conflict water allocation. - Organization of water conservation on transboundary watercourses. - Interaction with hydro meteorological services of the countries on flow forecast and account. - Introduction of automation into head structures. - Regular work on ICWC and its bodies' activity advancement. - Interstate Agreements preparation. - International relations. - Scientific researches. - Training.

3	Global Water Partnership Caucasus and Central Asia (GWP CACENA)	<p>GWP CACENA Regional Secretariat is based in Tashkent, Uzbekistan and is hosted by the International Water Management Institute (IWMI)</p>	<p>GWP's action network provides knowledge and builds capacity to improve water management at all levels: global, regional, national and local.</p> <p>GWP CACENA is a well-established regional actor, who helps the region to solve difficult interstate water resources issues as well as the countries to develop an Integrated Water Resources Management approach in policies and practices.</p>	<p>GWP CACENA will help to raise capacity and ability of the region to use power of IWRM for sustainable development and increase water security, which should ensure the following:</p> <ul style="list-style-type: none"> -Provision of every household with public utilities related to water supply and sanitation -Achievement of economic productivity in all sectors of economy (including irrigation and energy sectors) -Sustainable development of the urban zones and cities -Maintaining healthy river and aquatic ecosystem environment -Adaptation of society to various changes (climate, risk management, preparedness for manmade and natural disasters, etc.)
4	The Regional Environmental Centre for Central Asia (CAREC)	<p>40, Orbita-1 Microdistrict, Almaty, Kazakhstan Phone: +7 (727) 265 4333, +7 (727) 265 4334 Fax: +7 (727) 265 4325 E-mail: info@carececo.org</p>	<p>CAREC is an independent, non-political and non-for-profit international organization with regional mandate to assist the Central Asian governments, regional and international stakeholders in addressing environmental and sustainability challenges across Central Asian region and Afghanistan.</p> <p>By promoting dialogue and collaboration among all environmental stakeholders, CAREC has today become a leading regional knowledge hub in the field of environment and sustainable development recognized by national, regional and international partners.</p>	<ul style="list-style-type: none"> - Water Initiatives Support Program: https://carececo.org/en/main/activity/programs/wis/ - Education for Sustainable Development Program: https://carececo.org/en/main/activity/programs/esd/ - Climate Change and Sustainable Energy Program: https://carececo.org/en/main/activity/programs/ccse/
5	The Center for Afghanistan Studies	<p>The Center for Afghanistan Studies: 6001 Dodge Street, Omaha, NE, 68182 Phone: 1-402-554-2375 Email: unoafghanstudies@unomaha.edu</p>	<p>CAS's mission is to promote and facilitate programs, trainings, faculty development and academic research on Afghanistan and the region and to promote awareness among UNO (University of Nebraska Omaha) students, and Omaha community members on Afghanistan and the countries around Afghanistan that share</p>	<ul style="list-style-type: none"> - Afghanistan Transboundary Water Resources: https://www.unomaha.edu/international-studies-and-programs/center-for-afghanistan-studies/academics/transboundary.php - Teacher Training: https://www.unomaha.edu/international-studies-and-programs/center-for-afghanistan-

		<p>Soraya Rahmanzai, University of Nebraska Omaha, International Studies & Programs Administrative Technician Phone: 1-402.554.2375</p>	<p>similar rich cultural heritage, sociopolitical and economic interests, traits and values.</p>	<p>studies/academics/teacher-training.php</p> <p>- Kabul Polytechnic University Partnership: https://www.unomaha.edu/international-studies-and-programs/center-for-afghanistan-studies/academics/engineering-partnership.php</p>
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Annexes IV: List of donor organizations for water resources in Central Asia with contacts

Annex IV.I: List of United Nations agencies

#	Name	Central Asian territorial scope	Contacts	Description	Focus directions related to water resources
1	United Nations Development Programme (UNDP) in Europe and Central Asia	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	<p>UNDP Regional Bureau for Europe and the Commonwealth of Independent States (RBEC) in New York One United Nations Plaza, 16th Floor New York, NY 10017, USA Telephone: +1 (212) 906 5000 RBEC Registry: +1 (212) 906 5777 Fax: +1 (212) 906 6595 E-mail: rbec.directorate@undp.org</p> <p>Regional Centre for Europe and the Commonwealth of Independent States Telephone: (+90) 850 288 22 06 E-mail: registry.rsci@undp.org</p>	<p>UNDP's goal in Europe and Central Asia is to help eradicate poverty in all its forms, accelerate the transition to sustainable development, and make sure countries and people are able to withstand crises and shocks. We work to make sure the most vulnerable and excluded are not left behind, develop game changing solutions to accelerate sustainable development, and promote prevention and preparedness against crises and shocks.</p>	<p>- Sustainable development: http://www.eurasia.undp.org/content/rbec/en/home/sustainable-development.html</p> <p>- Climate and disaster resilience: http://www.eurasia.undp.org/content/rbec/en/home/climate-and-disaster-resilience.html</p>
1.1	UNDP Afghanistan	Afghanistan	<p>UNDP Country Office P.O Box # 05 Jalalabad Road, UNOCA Complex Kabul, Afghanistan registry.af@undp.org Tel: +93 (0) 72 899 9001</p>		<p>- Environment and Resilience: http://www.af.undp.org/content/afghanistan/en/home/EnvironmentandResilience/</p>

1.2	UNDP Kazakhstan	Kazakhstan	<p>UN House / UNDP Office in Astana 14, Mambetov str., Astana, 010000, Kazakhstan, Tel.: 7 7172 696 550, Fax: 7 7172 696 540 registry.astana.kz@undp.org</p> <p>UN House / UNDP Liason Office in Almaty, 67, Tole Bi str, Almaty, 050000, Kazakhstan, Tel.: 7 727 258 26 43, Fax: 7 727 258 26 45 registry.kz@undp.org</p>		<p>- Environment and Energy: http://www.kz.undp.org/content/kazakhstan/en/home/operations/projects/environment_and_energy.html</p>
1.3	UNDP Kyrgyzstan	Kyrgyzstan	<p>160 Chui Avenue Bishkek, Kyrgyz Republic 720040 Phone: +996-312-611211 Fax: +996-312-611217</p> <p>UNDP Deputy Resident Representative in the Kyrgyz Republic AlionaNiculita: aliona.niculita@undp.org</p> <p>Assistant Resident Representative ErkinbekKasybekov: erkinbek.kasybekov@undp.org</p>		<p>- Climate and Disaster Resilience: http://www.kg.undp.org/content/kyrgyzstan/en/home/operations/crisispreventionand recovery/overview.html</p> <p>- Sustainable development: http://www.kg.undp.org/content/kyrgyzstan/en/home/operations/projects/sustainable_development/env-protection-for-sustainable-development.html</p>
1.4	UNDP Tajikistan	Tajikistan	<p>Dushanbe Country Office: 39 Aini Street 734024 Dushanbe, Tajikistan Email: registry.tj@undp.org Phone: (+992 44) 600 56 00 Fax: (+992 44) 600 55 96 (227)</p>		<p>- Disaster Risk Management Programme: http://www.tj.undp.org/content/tajikistan/en/home/operations/projects/E5crisis_prevention_and_recovery.html</p> <p>- The Energy and Environment Programme: http://www.tj.undp.org/content/tajikistan/en/home/ope</p>

					rations/projects/environment and energy.html
1.5	UNDP Turkmenistan	Turkmenistan	UN Building 21 Archabil avenue Ashgabat, 744036, Turkmenistan Phone: (+993 12) 48 83 25 Fax: (+993 12) 48 83 11 E-mail: registry.tm@undp.org		- Resilience, Climate Change & Energy: http://www.tm.undp.org/content/turkmenistan/en/home/operations/projects/environment and energy.html
1.6	UNDP Uzbekistan	Uzbekistan	4 Taras Shevchenko Street, Tashkent 100029, Uzbekistan email: registry.uz@undp.org Tel: +998 71 120 34 50 Fax: +998 71 120 34 85		- Sustainable development: http://www.uz.undp.org/content/uzbekistan/en/home/sustainable-development.html - Climate Change and Environment: http://www.uz.undp.org/content/uzbekistan/en/home/climate-and-disaster-resilience.html
2	The United Nations Economic Commission for Europe (UNECE)	CA & Afghanistan		UNECE's major aim is to promote pan-European economic integration. As a multilateral platform, UNECE facilitates greater economic integration and cooperation among its member countries and promotes sustainable development and economic prosperity through: - policy dialogue, - negotiation of international legal instruments, - development of regulations and norms, - exchange and application of best practices as well as economic and technical expertise, - technical cooperation for countries with economies in transition.	- Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) - Projects in CA: http://www.unece.org/env/water/centralasia.html - UNECE-WHO/Europe Protocol on Water and Health: http://www.unece.org/env/water/pwh_text/text_protocol.html '- United Nations Special Programme for the

					Economies of Central Asia (SPECA): https://www.unece.org/spec/a/welcome.html
2.1	UNECE	Kazakhstan National focal point	KAZAKHSTAN H.E. Mr. Yerlan NYSSANBAYEV Vice-Minister, Ministry of Agriculture Kenesary street, 36. 010000 ASTANA E-Mail: nysanbayev.ye@minagri.gov.kz		- Supporting Kazakhstan's transition towards Green Economy model (with UNDP): http://www.unece.org/environmental-policy/conventions/water/areas-of-work-of-the-convention/envwatercentralasia/supporting-kazakhstans-transition-towards-green-economy-model.html
2.2	UNECE	Kyrgyzstan National focal point	KYRGYZSTAN Ms. Bubudzhan ARYKBAEVA (For the Protocol on Water and Health) Director General Office on Noncontagious Disease Prevention and State Sanitary Control 148 Moskovskaya St., 720040 BISHKEK Phone: +0312323940 / +0555713720 Fax: +0312323214, E-mail: abk_cgsn@mail.ru		- Regional Dialogue and Cooperation on Water Resources Management in Central Asia (Phase 1,2,3): http://www.unece.org/env/water/cadialogue/3rdphase.html
2.3	UNECE	Tajikistan National focal point	Mr. Sul-tonRahimov First Deputy Head of Ministry of Melioration and Water of Tajikistan DUSHANBE E-mail: sulton30@mail.ru Mr. Kholmakhmad NAZAROV Head of State Sanitary and Epideiological Surveillance Service, Ministry of Health 8, Chapaev St., 734025 DUSHANBE Phone: +992 3722 749 48 Fax: +992 372 273 513 E-mail: s.nazarov_64@mail.ru		- Transboundary cooperation in Chu and Talas river basin: http://www.unece.org/env/water/centralasia/chutalas.html - Capacity building for cooperation on dam safety in Central Asia: http://www.unece.org/env/water/damsafety.html

2.4	UNECE	Uzbekistan National focal point	<p>Mr. Bori ALIHANOV First Deputy Chairman, State Committee for Nature Protection 99, Amir. Temur St., 700084 TASHKENT Phone: + 99871 139 11 71, 139 10 78 Fax: + 99871 135 79 20 E-mail: prognoz@ecoinf.org.uz</p> <p>Mr. Saidazim MIRZAYEV State Committee for Nature Protection 99, Amir. Temur St., 700084 TASHKENT Phone: + 99871 139 48 13, Fax: + 99871 135 0761 E-mail: halmat@ecoinf.org.uz</p> <p>Ms. Olga MIRSHINA (For the Protocol on Water and Health) Chief Specialist, Ministry of Health 12, Navoi St., 100011 TASHKENT Phone: +998 71 276 6742, Fax: +998 71 2394 198 E-mail: mop-61@mail.ru</p>	<p>- Water quality in Central Asia - Strengthening cooperation on water quality management in Central Asia: http://www.unece.org/envir/monmental-policy/conventions/water/areas-of-work-of-the-convention/envwatercentralasia/water-quality-wq-project-2015.html</p> <p>- Strengthening cooperation on hydrology and environment between Afghanistan and Tajikistan in the upper Amu Darya River basin: http://www.unece.org/envir/monmental-policy/conventions/water/areas-of-work-of-the-convention/envwatercentralasia/strengthening-cooperation-on-hydrology-and-environment-between-afghanistan-and-tajikistan-in-the-upper-amu-darya-river-basin.html</p> <p>- Network of EECCA Water Management Organizations http://www.eecca-water.net/</p>
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3	International Water Assessment Center (IWAC)		<p>Astana, Kazakhstan Syganak street, 29, 17th floor, office 1703 Phone: +7 (7172) 790 430 Email: info@iwac.kz Website: www.iwac.kz</p>	<p>The International Water Assessment Center (IWAC) is the subsidiary joint body of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes. IWAC will:</p> <ul style="list-style-type: none"> - provide scientific, methodological and technical support to national governments for the implementation of the provisions of the Convention; - assist countries to introduce best practices, including through pilot projects on transboundary waters; - assist Parties to the Convention with an economy in transition through the organization of seminars and workshops on the exchange of information on best available technologies, on the results of research and development, on training related to monitoring and assessment of the state of water resources; - assist to the Parties to the Convention in the preparation of reports on the status of transboundary waters, including on the basis of general regional information, as well as in the development and maintenance of relevant databases. 	<ul style="list-style-type: none"> - Supporting monitoring, assessment and information sharing in transboundary basins - Promoting an integrated and intersectoral approach to water management at all levels - Adapting to climate change in transboundary basins <p>(Work programm of the International Water Assessment Centre for 2019-2021: https://iwac.kz/images/2018/10/Programm_MCOV_ENG.pdf)</p>
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4	United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)	CA & Afghanistan	ESCAP Subregional Office for North and Central Asia 68A, Amangeldy Street, Almaty, Kazakhstan Tel: +7 727 3384400 Fax: +7 727 3384417 Email: escap-sonca@un.org	The overall objective of ESCAP is to promote inclusive and sustainable economic and social development in the Asia-Pacific region, with priority accorded to the implementation of the 2030 Agenda for Sustainable Development and the achievement of the Sustainable Development Goals. ESCAP emphasizes strengthening institutional capacities to serve the rights of the people of the region and address their aspirations and needs.	- United Nations Special Programme for the Economies of Central Asia (SPECA): https://www.unece.org/spec/a/welcome.html
5	United Nations Educational, Scientific and Cultural Organizations (UNESCO) Cluster Bureau for Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan	Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan	Director of UNESCO Almaty Office: Ms. Krista Pikkat 67, Tole Bi Street. 050000. Almaty, Kazakhstan. Tel.+7(7272)582643. Fax:+7(7272)794853 E-mail: almaty@unesco.org	UNESCO's mission is to contribute to peace and human development through Education, the Sciences, Culture and Communication. Throughout its activities and projects, UNESCO performs the following range of functions: <ul style="list-style-type: none"> •laboratory of ideas; •standard setter; •clearinghouse; •capacity-builder in Member States; •catalyst for international cooperation. 	- Education for sustainable development: http://en.unesco.kz/tag/_Education+for+Sustainable_Development - Science for a Sustainable Future: http://en.unesco.kz/tag/sustainable-science
5.1	UNESCO office in Tashkent	Uzbekistan	UNESCO Tashkent Office 9, Ergashev str. Tashkent. Uzbekistan, 100084 Email: tashkent@unesco.org Tel: + 998 78 120 71 16, 120 71 54/55 Fax: + 998 78 120 71 59	<ul style="list-style-type: none"> •standard setter; •clearinghouse; •capacity-builder in Member States; •catalyst for international cooperation. 	- Education: http://www.unesco.org/new/en/tashkent/education/ - Natural Sciences: http://www.unesco.org/new/en/tashkent/natural-sciences/

6	United Nations Environment Programme (UNEP)	Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	Head of UNEP's Sub-regional Office for Central Asia Natalia Alexeeva 67, Tole Bi Street. 050000. Almaty, Kazakhstan. Phone: +7 (727) 258 2643 Fax: +7 (727) 2582645 e-mail: Natalia.alexeeva@unep.org	The United Nations Environment Programme (UN Environment) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment.	<ul style="list-style-type: none"> - Water: https://www.unenvironment.org/explore-topics/water/about-water#ourwork - Climate change: https://www.unenvironment.org/explore-topics/climate-change/about-climate-change#ourwork - Risk reduction: https://www.unenvironment.org/explore-topics/disasters-conflicts/what-we-do/risk-reduction - Sustainable Development Goals: https://www.unenvironment.org/explore-topics/sustainable-development-goals/about-sustainable-development-goals#ourwork
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7	United Nations Strategy for Disaster Reduction (UNISDR)			<p>As the UN office for disaster risk reduction, UNISDR supports the implementation, follow-up and review of the Sendai Framework for Disaster Risk Reduction 2015-2030, which was adopted by the Third UN World Conference on Disaster Risk Reduction on 18 March 2015 in Sendai, Japan.</p> <p>The Sendai Framework is a 15-year voluntary, non-binding agreement that maps out a broad, people-centred approach to disaster risk reduction, succeeding the Hyogo Framework for Action that was in force from 2005 to 2015.</p>	
7.1	UNISDR Asia and Pacific	Afghanistan	<p>UNISDR Asia and Pacific 7th Floor, Block B, UN Secretariat Building, Rajdamnernok Avenue 10200, Bangkok, Thailand Phone: +66 02288 2745 www.unisdr.org/asiapacific</p> <p>Focal Point: Afghanistan National Disaster Management Authority (ANDMA) Website: http://www.andma.gov.af/ General Director Phone: 0093 700275830 International Relation ,Manager of ANDMA Phone: +93 202 104 881 +93 799 459 913</p>		

7.2	UNISDR Europe	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	UNISDR Europe 14 Rue Montoyer 1000, Brussels, Belgium Phone: +32 22 902 588 Fax: +32 22 904 950 isdr-europe@un.org		
7.2.1	UNISDR Europe	Kazakhstan	Kazakhstan Focal Point Committee for emergency situations of the Ministry of Internal Affairs Website: http://www.emer.gov.kz Contact: Head Phone: +7 (7172) 55 96 06 +7 (775) 4000679 https://www.unisdr.org/partners/countries/kaz		
7.2.2	UNISDR Europe	Kyrgyzstan	Kyrgyzstan Focal Points Sendai Framework Ministry of Emergency Situations of the Kyrgyz Republic (MES KGZ) Website: http://en.mes.kg/ Phone: +996 312 614 734 +996 770 221 226 Hyogo Framework for Action Kyrgyz National Platform Secretariat Website: http://npdrr.kg/ Contact: Head Phone: +996 (312) 452496/97 +996 (555)757338 https://www.unisdr.org/partners/countries/kgz		

7.2. 3	UNISDR Europe	Tajikistan	Tajikistan Focal Point Ministry of Emergency Situations and Civil Defense Contact: Chief Phone: +992 372 218 742 +992 907 729 769 https://www.unisdr.org/partners/countries/tjk		
7.2. 4	UNISDR Europe	Turkmenistan	Turkmenistan Focal Point https://www.unisdr.org/partners/countries/tkm		
7.2. 5	UNISDR Europe	Uzbekistan	Uzbekistan Focal Point Ministry of Emergency Situations (Uzbekistan) (MES RU) Contact: Head of Department https://www.unisdr.org/partners/countries/uzb		
8.	United Nations Regional Centre for Preventive Diplomacy for Central Asia (UNRCCA)	Central Asia	43 Archabil Avenue 744036, Ashgabat, Turkmenistan Tel.: +99312 481612/13/14; Fax: +99312 481607 E-mail: unrcca-dpa@un.org Website: http://unrcca.unmissions.org/	- UNRCCA is a special political mission of the United Nations Organization. The role of the Centre is to identify and address existing and potential threats to regional stability. In addition, the Centre facilitates partnerships between the governments of Central Asia in cooperation with regional and international organizations. The current Programme of Action for 2018-2020 focuses on five key priority areas, which correspond to the	Management of Common Natural Resources and Environmental Degradation (capacity building, climate change): https://unrcca.unmissions.org/management-common-natural-resources-and-environmental-degradation - Preventive diplomacy training programme: https://unrcca.unmissions.org/trainings

				Centre's mandate: (1) Promoting prevention among the governments of CA; (2) Monitoring and early warning; (3) Building partnerships with the states of CA for conflict prevention (4) Strengthening the UN's preventive activities in the region; (5) Encouraging cooperation and interaction between Central Asia and Afghanistan	
8.1	UNRCCA Representative in Kazakhstan	Kazakhstan	Point of contact: Ms. BakhitAbdildina 14, Bokeikhan Street, Office 212 Astana, 010000, Kazakhstan Tel: +7 7172 696542; Fax: +7 7172 696540 Mobile: +7 701 5299592; +7 777 2222696 E-mail: abdildina@un.org		
8.2	UNRCCA Representative in Kyrgyzstan	Kyrgyzstan	Point of contact: Mr. MirlanMamyrov 160, Chui Avenue, Bishkek, 720040, Kyrgyzstan Tel: +996312 611213 (232); Fax: +996312 611217 Mobile: +996555 774588 E-mail: mamyrov@un.org		
8.3	UNRCCA Representative in Tajikistan	Tajikistan	Point of contact: Ms. SanoatJumaeva 39, Aini Street, Dushanbe, 734024, Tajikistan Tel: +99244 6005596/192, Fax: +99244 6005596 Mobile: +99293 5017877 E-mail: jumaeva@un.org		

8.4	UNRCCA Representative in Uzbekistan	Uzbekistan	Point of contact: Mr. Nodir Khudayberganov 4, Taras Shevchenko Street Tashkent, 100029, Uzbekistan Tel: 99871 1203450, Mobile: 99893 5011453 E-mail: khudayberganov@un.org		
9	FAO for Europe and Central Asia		FAO Regional Office for Europe and Central Asia 34 Benczurutca H-1068 Budapest Hungary Tel: +36 1 4612000 Fax: +36 1 3517029 E-mail: FAO-RO-Europe@fao.org	In Europe and Central Asia FAO works with Members and partners for the eradication of food insecurity, malnutrition and rural poverty, for sustainable management of natural resources, and to ensure that agriculture contributes its full potential to national economies. With these needs in mind, Member Governments have agreed to prioritize actions under three Regional Initiatives: 1. Empowering smallholders and family farms for improved rural livelihoods and poverty reduction 2. Improving agrifood trade and market integration 3. Managing natural resources sustainably, under a changing climate	- Empowering Smallholders and Family Farms for Improved Rural Livelihoods and Poverty Reduction: http://www.fao.org/europe/ regional- initiatives/smallholders- family-farms/en/ - Sustainable, climate- resilient natural resource management: http://www.fao.org/europe/ regional-initiatives/ri3/en/
9.1	FAO in Afghanistan	Afghanistan	FAO Representative: ARYAL, MR RAJENDRA KUMAR FAO-AF@fao.org	FAO assistance in Afghanistan is centered on six priority areas of support agreed with the Government: - Fostering agricultural productive capacity; - Improved water resource and irrigation management; - Formulation and implementation of effective agricultural policies;	- Support to better water resource and irrigation development and management - Support to better natural resource management http://www.fao.org/3/a- bl941e.pdf

				<p>Improved natural resource management, through sustainable environmental management;</p> <ul style="list-style-type: none"> - Food and nutrition security and enhanced institutional capacities to address issues regarding food safety and quality; - Capacity development for emergency management. 	
9.2	FAO in Kazakhstan	Kazakhstan	<p>Investment Support Officer and Officer-in-Charge:</p> <p>NAZHMIDENOV, MR KAIRAT BALTABAEVICH FAO-KZ@fao.org</p>	<p>FAO's assistance in Kazakhstan focuses on five priority areas:</p> <ul style="list-style-type: none"> - Food safety and organic food production; - Animal health and livestock production, pasture and phytosanitary management, including technical assistance to minimize the risk of foot-and-mouth disease and other transboundary animal diseases; - Sustainable natural resource management with a view to strengthening the national capabilities and enhancing policy dialogue and regional cooperation; - Fisheries and aquaculture, with support focused on the responsible management and conservation of fisheries resources; - Information technologies for agricultural statistics and related data collection and analysis. 	<ul style="list-style-type: none"> - Capacity of the national institutions, natural resources managers and agricultural producers for sustainable natural resources management strengthened - Policy dialogue and regional cooperation on integrated management of transboundary river basins enhanced <p>http://www.fao.org/3/a-bp564e.pdf</p>

9.3	FAO in Kyrgyzstan	Kyrgyzstan	<p>FAO Representative: KINLAY, MR DORJEE FAO-KG@fao.org</p>	<p>FAO's assistance in Kyrgyzstan focuses on four priority areas:</p> <ul style="list-style-type: none"> - Enhancing capacities to assess, plan and implement action for achieving sustainable food and nutrition security; - Strengthening professional and institutional capacities, legal frameworks and support services for sustainable use of natural resources for agricultural productivity growth, effective inclusive agricultural value chains, and increased rural income; - Improving resilience to climate change, crises and disasters; - Enhancing capacities for strengthening a socially sensitive market economy to reduce rural 7.4poverty, especially among women-headed households. 	<ul style="list-style-type: none"> - Strengthened core conditions (professional and institutional capacities; policy/legal frameworks, support services) to ensure sustainable resource use for agricultural value chains, and increased rural income, with special focus on fisheries and livestock sectors - Improved resilience in responding to climate change, crises and disasters http://www.fao.org/3/a-au213e.pdf
9.4	FAO in Tajikistan	Tajikistan	<p>FAO Representative: GUCHGELDIYEV, MR OLEG FAO-TJ@fao.org</p>	<p>FAO assistance in Tajikistan focuses on three medium-term priority areas:</p> <ul style="list-style-type: none"> - Sustainable food security and nutrition, through institutional reforms, capacity building and support to the development and implementation of national food security policies; - Sustainable management of natural resources and improved resilience to climate change, with a clear emphasis on tackling land degradation as well as the application of a landscape and watershed management approach; - Sustainable agricultural productivity and competitiveness, concentrating on livestock production and health and crop production intensification. 	<ul style="list-style-type: none"> - Sustainable management of natural resources and improved resilience to climate change http://www.fao.org/3/a-bp563e.pdf

9.5	FAO in Turkmenistan	Turkmenistan	<p>FAO has no formal Representation in the country.</p> <p>For more information, visit the worldwide offices page</p>	<p>FAO interventions and resource mobilization for Turkmenistan envisages three priority areas:</p> <ul style="list-style-type: none"> - Agricultural production and food security, with a view to increasing the contribution of agriculture, forestry and fisheries to the country's economic growth; - Sustainable natural resource management, climate change mitigation and adaptation; - Increased resilience of rural livelihoods to agriculture and food security threats and shocks, with a view to increasing capacities for coping with the impacts of drought. 	
9.6	FAO in Uzbekistan	Uzbekistan	<p>FAO Representative:</p> <p>GUTU, MR VIOREL FAO-UZ@fao.org</p>	<p>FAO's assistance in Uzbekistan centers on five thematic priority areas:</p> <ul style="list-style-type: none"> - Diversification of cropping systems and sustainable production intensification; - Promotion of efficient locust control techniques, integrated pest management, conservation agriculture and other good agricultural practices; - Livestock production and disease control, and beekeeping; - Aquaculture and inland fisheries development; Sustainable natural resource management. 	<p>- Sustainable management of natural resources http://www.fao.org/3/a-bp561e.pdf</p>

Annex IV.II List of multilateral development partners

#	Donor organization	Central Asian territorial scope	Contacts	Description	Focus directions related to water resources
1	The World Bank in Central Asia	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan	World Bank Central Asia Regional Office 41A Kazybek bi Street, 4th floor Almaty, 050010, Kazakhstan Tel.: +7 727 377-8220	World Bank supports the efforts of the countries to improve the living standards of their people, promote economic growth, and ensure that future generations benefit from sound environmental practices and social development.	<ul style="list-style-type: none"> - Central Asia Energy-Water Development Program: https://www.worldbank.org/en/region/eca/brief/cawep - Central Asia Hydrometeorology Modernization Project: http://projects.worldbank.org/P120788/central-asia-hydrometeorology-modernization-project?lang=en&tab=overview - Climate Adaptation and Mitigation Program for Aral Sea Basin CAMP4ASB: http://projects.worldbank.org/P151363?lang=en - Central Asian Journal of Water Research (CAJWR): https://www.water-ca.org/
1.1	The World Bank In Afghanistan	Afghanistan	Country Office Contacts Kabul +93 (0) 701133328 infoafghanistan@worldbank.org	The World Bank Group's support to Afghanistan over 2017-2020 aims to help Afghanistan build strong and accountable institutions to deliver services to its citizens, and to encourage growth of the private sector. The Country Partnership Framework also aims at supporting economic	<ul style="list-style-type: none"> - Afghanistan projects (water & sanitation, climate change, agriculture and etc.): http://projects.worldbank.org/search?lang=en&searchTerm=&countrycode_exact=AF

				growth that includes all members of society, with a focus on lagging areas, urban informal settlements, and people driven from their homes by conflict.	
1.2	The World Bank in Kazakhstan	Kazakhstan	Country Office Contacts Astana, +7 7172 691-440 12 Samal, 14 floor, 010000 Astana astana_office@worldbank.org	Kazakhstan Country partnership strategy for the period 2012-2017 concentrated on the key priorities of competitiveness and jobs; strengthened governance in public administration and service delivery; and safeguarding the environment.	- Kazakhstan projects (water & sanitation, climate change, agriculture and etc.): http://projects.worldbank.org/search?lang=en&searchTerm=&countrycode_exact=KZ
1.3	The World Bank in Kyrgyzstan	Kyrgyzstan	Country Office Contacts Bishkek, +996 312 625-262 214 Moskovskaya St., Bishkek, 720010, Kyrgyz Republic niosipenko@worldbank.org	World Bank engagement in Kyrgyzstan for the next several years will be built around three focus areas: - strengthening the foundations for inclusive private sector-led growth, focusing especially on fiscal stability, improvements to the regulatory environment for business, and risk reduction; - boosting overall productivity and building greater connectivity through support for the development of promising natural resource sectors and greater digital and physical connectivity; - expanding economic opportunities and building resilience through investments in human capital, efforts to decentralize and support regional development, and better adaptation to environmental and climate risks.	- Kyrgyzstan projects (water & sanitation, climate change, agriculture and etc.): http://projects.worldbank.org/search?lang=en&searchTerm=&countrycode_exact=KG

1.4	The World Bank in Tajikistan	Tajikistan	Country Office Contacts Dushanbe, +992 48 701-5810 48 Ayni Street, Business Center "Sozidanie", 3rd floor, Dushanbe, Tajikistan tajikistan@worldbank.org		- Tajikistan projects (water & sanitation, climate change, agriculture and etc.): http://projects.worldbank.org/search?lang=en&searchTerm=&countrycode_exact=TJ
1.5	The World Bank in Turkmenistan	Turkmenistan	Country Office Contacts Ashgabat, +993 12 487450 UN Building, 21 Archabil Avenue, 744036, Ashgabat, Turkmenistan ashgabat@worldbank.org		- Turkmenistan projects (water & sanitation, climate change, agriculture and etc.): http://projects.worldbank.org/search?lang=en&searchTerm=&countrycode_exact=TM
1.6	The World Bank in Uzbekistan	Uzbekistan	Country Office Contacts Tashkent, +998 71 120-2400 107B Amir Temur Street, Block C, 15th floor, 100084, Tashkent, Uzbekistan tashkent@worldbank.org		- Uzbekistan projects (water & sanitation, climate change, agriculture and etc.): http://projects.worldbank.org/search?lang=en&searchTerm=&countrycode_exact=UZ
2	Investment facility for Central Asia (IFCA)	Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan	Email: europeaid-ifca@ec.europa.eu	IFCA, set up in 2010 as part of the Development Cooperation Instrument (DCI), is one of the instruments to support the EU Strategy for Central Asia. IFCA finances projects with the following aims: - Better energy infrastructure - Increasing protection of the environment and better focus and control of climate change impacts - Creation and growth of small and medium enterprises and improvement	- Water and sanitation - Environment and green economy https://ec.europa.eu/europeaid/policies/innovative-financial-instruments-blending/blending-operations_en

				of the employment situations - Improving social services and infrastructure, including health and education.	
3	The European Investment Bank (EIB)	Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan	<p>EIB Switchboard: 98-100, boulevard Konrad Adenauer L-2950 Luxembourg (+352) 43 79 1; (+352) 43 77 04</p> <p>General information: Enquiries regarding the financing facilities, activity, organisation and objectives of the EIB Information Desk: +352 4379-22000; +352 4379-62000</p>	<p>Within the framework of the EIB External Lending Mandate, priority is given to projects which contribute to improving energy supplies and environmental protection. Eligible projects in the environmental sector: expansion, modernisation and upgrading of infrastructure and procurement of equipment for energy saving as well as schemes leading to a significant improvement of the environment.</p> <p>In addition, Central Asian countries are eligible under the Bank's own risk Climate Action & Environment Facility (CAEF) for investment grade projects in renewable energy, energy efficiency, carbon capture, transportation or storage projects aiming specifically to reduce greenhouse gas emissions and projects contributing substantially to security of EU energy supply.</p>	<p>- Water & sewerage: http://www.eib.org/en/projects/loan/list/index.htm?from=2013&region=8&sector=2030&to=2018&country=</p> <p>- Agriculture, fisheries, forestry: http://www.eib.org/en/projects/loan/list/index.htm?from=2013&region=8&sector=6000&to=2018&country=</p> <p>- Climate and environment: http://www.eib.org/en/projects/priorities/climate-and-environment/climate-action/index.htm?f=search&media=search</p>
4	The European Bank for Reconstruction and Development (EBRD)	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan		<p>One of the key funding channels of EBRD includes the above-mentioned Investment Facility for Central Asia (IFCA) which plays a central role in supporting EBRD activities in Central Asia. It covers Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan, and is aimed at promoting investments in the energy, small and</p>	<p>- Municipal and Environmental Infrastructure: https://www.ebrd.com/municipal-and-environmental-infrastructure.html</p> <p>- Agribusiness (reducing the environmental</p>

				<p>medium-sized enterprise (SME) and social sectors.</p> <p>EBRD’s approach to sustainability involves “Green Economy Transition” and additionally:</p> <ul style="list-style-type: none"> • incorporating environmental and social requirements into the appraisal and implementation of all Bank-funded projects based on EU standards and international good practice • providing finance and technical assistance specifically aimed at addressing environmental and social issues • promoting economic inclusion and access to community services such as water and public transport • supporting projects that promote gender equality • encouraging public participation through pre-investment consultation and information disclosure, and maintaining regular strategic dialogue with civil society organisations and other stakeholders 	<p>footprint):</p> <p>https://www.ebrd.com/agribusiness.html</p>
4.1	EBRD Kazakhstan	Kazakhstan	<p>Almaty Resident Office 41 Kazybek Bi street, Park Palace Business Centre 3-rd Entrance, 3-rd Floor 050010, Almaty Tel: +7 727 332 00 00</p> <p>Astana Resident Office “SAAD” BC, 10th Floor, 2 Dostyk street, Yesil district, Astana, Tel. +7 7172 554246; Fax: +7 7172 554245</p> <p>Aktobe office</p>		<p>- Municipal and environmental infrastructure: https://www.ebrd.com/work-with-us/project-finance/project-summary-documents.html?c15=on&s8=on&d0=on&d1=on&d6=on&d7=on&d12=on&d18=on&keywordSearch=</p> <p>- Agribusiness:</p>

			173/1 Sankibaybatyrave, “Progress” Business Centre, office 301 Aktobe, 030012 Tel: + 7 7132 703 841, +7 7132 703 842		https://www.ebrd.com/work-with-us/project-finance/project-summary-documents.html?c15=on&s0=on&d0=on&d1=on&d6=on&d7=on&d12=on&d18=on&keywordSearch=
4.2	EBRD Kyrgyz Republic	Kyrgyzstan	Bishkek Resident Office Business Centre Orion 21 Erkindik Boulevard, 4th Floor, 720040, Bishkek Tel: (+996 312) 624 016, 624 017 Karakol office 122 GebzeStr, 2nd floor, 722200, Karakol Tel: (+996 3922) 52050 Osh office Osh-Nuru Hotel 1 Bayalinov Street, 2nd floor, Office 217, 723500, Osh Tel: (+996 3222) 21139		
4.3	EBRD Tajikistan	Tajikistan	Dushanbe Resident Office 34 Rudaki avenue, TCELL Plaza, 12 floor 734025 Dushanbe, Tel: +992 (37) 2 210763; 2213 543; 2216709; 2216718; 2219832; 2510178; 2512424		
4.4	EBRD Turkmenistan	Turkmenistan	Ashgabat Resident Office “Berkarar” Business Center, 13th floor, Suite M3, 82, 1972 street (Ataturk) 744000 Ashgabat Tel.: +993 12 46 88 20 Fax: +993 12 46 88 26		

4.5	EBRD Uzbekistan	Uzbekistan	1, Qoratosh Street, Tashkent, 100027 Uzbekistan Tel: +99871 140 44 00		
5.1	OSCE Programme Office in Astana	Kazakhstan	Colin McCullough Political Officer OSCE Programme Office in Astana 10 Beibitshilik Street Z10K8H4 Astana, Kazakhstan Mobile: +7 701 727 97 66 Office: +7 7172 580070, Fax: +7 7172 328304 astana-kz@osce.org	Water resource management, oil spill prevention and transparency of the extractive industry are the main themes of the OSCE's environmental portfolio in Kazakhstan. The Office promotes regional cooperation on environmental concerns, supports Kazakhstan's efforts to transition to a green economy, and promotes the implementation of the Aarhus Convention on public access to information and participation in environmental decision-making and justice in the country.	- Environmental activities: https://www.osce.org/astana/106457
5.2	OSCE Programme Office in Bishkek	Kyrgyzstan	Kunduz Rysbek National Press and Public Information Officer OSCE Programme Office in Bishkek 6 Ryskulov Street 720001 Bishkek, Kyrgyzstan Office: +996 312 61 24 45 (7113) Mobile: +996 775 98 14 04 Fax: +996 312 61 24 40 kunduz.rysbekkyzy@osce.org Bishkek@osce.org	The Office focuses on assisting the Kyrgyz Government in addressing environmental challenges and disaster risk reduction issues. In particular, the implementation of the Aarhus Convention, promotion of a green economy by supporting forums for sharing knowledge, resources, and experience between state officials and civil society. It supports the Chuy-Talas Commission, which facilitates co-operation between Kyrgyzstan and Kazakhstan on water management.	- Environmental activities: https://www.osce.org/programme-office-in-bishkek/106159
5.3	OSCE Programme Office in Dushanbe	Tajikistan	MuniraShoinbekova Senior Press and Public Information Assistant OSCE Programme Office in Dushanbe 18a Ahmadi Donish Avenue 734012 Dushanbe, Tajikistan	To encourage a regional dialogue on water resources management and cross-border pollution, the Programme Office promotes international conventions and brings together officials and civil society from Central	- Environmental activities: https://www.osce.org/programme-office-in-dushanbe/106430

			Office: +992 37 2265014 /15 /16 /17 /18 Mobile: +992 988040434 Fax: +992 37 2265019 POiD@osce.org	Asian countries to discuss common challenges. It supports seven Aarhus Centres across Tajikistan, where the public can find information on environmental policies and legislation. The Programme Office also runs training courses on energy diplomacy for Tajik and Afghan officials.	
5.4	OSCE Centre in Ashgabat	Turkmenistan	OSCE Centre in Ashgabat TurkmenbashyShayoly 15 744005 Ashgabat Turkmenistan Office: +993 12 94 60 92 Fax: +993 12 94 60 41 info_tm@osce.org	The Centre's key activities in this field are to raise the awareness for environmental issues of institutions and organizations and to build their capacities to deal with them. It assists the Aarhus Centre of Turkmenistan. It has also helped develop a geographic information system to maintain the country's irrigation infrastructure; and trained water administration officials on new database systems for a water distribution network.	- Environmental activities: https://www.osce.org/ashgabat/106256
5.5	OSCE Project Coordinator in Uzbekistan	Uzbekistan	OSCE Project Co-ordinator in Uzbekistan 12B Afrosiyob Street, 4th floor, Mirobod district 100015 Tashkent Uzbekistan Office: +998 71 140 04 69/70/71/72 Fax: +998 71 140 04 68 OSCE-PCUz@osce.org	Main areas of activity are to help develop a renewable energy policy for Uzbekistan; monitor the pollution levels in the regional river system of the Syr-Darya; and raise awareness for disaster preparedness measures. The Co-ordinator works with the State Nature Protection Committee on water quality initiatives, and organizes training for state institutions on how to better prevent and respond to emergency situations.	- Environmental activities: https://www.osce.org/project-coordinator-in-uzbekistan/106123
6.1	Delegation of the European Union to Afghanistan	Afghanistan	Delegation of the European Union to Afghanistan CharahiSedarat, Shahr-e-Naw (Opposite the Ministry of Interior), Kabul, Afghanistan +93 20 2200457, +93 20 2200451	Assistance from the EU Budget is managed by the European Commission (EC), through the European Union Delegation to Afghanistan in Kabul. EU defined interventions in four focal areas - agriculture and rural	

			+93 20 2200443 DELEGATION-AFGHANISTAN- PRESS@eeas.europa.eu	development, health, policing and rule of law and democratisation and accountability. In addition to receiving bilateral assistance, Afghanistan is the recipient of EU funds under regional programmes for Asia, in particular Aid for Uprooted People, as well as thematic programmes such as Food Security, Non-State Actors, the European Instrument for Democracy and Human Rights and the Instrument contributing to Stability and Peace.	
6.2	Delegation of the European Union to Kazakhstan	Kazakhstan	Kosmonavtov st. 62, 7th floor Z05E9E1, Astana, Kazakhstan Telephone: + 7 7172 97 45 40 Delegation-Kazakhstan@eeas.europa.eu	<p>EU programs in CA:</p> <p>1. The Regional Coordination and Support for the EU-Central Asia Enhanced Regional Cooperation on Environment, Climate Change and Water (WECOOP2) project was launched by the European Union in August 2016. It intends to continue strengthening the dialogue and sustainable development between the Central Asia partners, and to facilitate their cooperation with the EU on environment and climate change. Specifically, the project efforts are concentrating on improving and rationalising the policies and expanding the capacities of national ministries and government agencies active in these areas. http://www.wecoop2.eu/</p> <p>2. TEMPUS Programme promoted institutional cooperation between the EU and Partner Countries and focused on the reform and modernisation of</p>	- Environment, Climate Change and Water: https://eeas.europa.eu/delegations/kazakhstan/area/projects_en

				<p>higher education systems in the Partner Countries of Eastern Europe, Central Asia, the Western Balkans and the Mediterranean region.</p> <p>https://eacea.ec.europa.eu/sites/2007-2013/tempus-programme_en</p> <p>3. Erasmus+ is the EU's programme to support education, training, youth and sport in Europe.</p> <p>http://ec.europa.eu/programmes/erasmus-plus/node_en</p>	
6.3	Delegation of the European Union to the Kyrgyz Republic	Kyrgyzstan	<p>21 Erkindik Boulevard, Business Centre Orion, 5th floor Bishkek, 720040, Kyrgyz Republic +996 312 26 10 00 delegation-kyrgyzstan@eeas.europa.eu</p>		<p>- Environment and Climate Action; Transport and Infrastructure (water and sanitation): https://eeas.europa.eu/delegations/kyrgyz-republic/area/projects_en</p>
6.4	Delegation of the European Union to Tajikistan	Tajikistan	<p>74 Adhamov street 734013 Dushanbe, Republic of Tajikistan (+992 37) 221 74 07 Delegation-Tajikistan@eeas.europa.eu</p>		<p>- Agriculture and Food Safety: https://eeas.europa.eu/delegations/tajikistan/area/projects_en</p>
6.5	EU Liaison Office in Turkmenistan	Turkmenistan	<p>1 passage MyatiKosayeva street, house 8 744000 Ashgabat, Turkmenistan Phone number: + 993 12 344677 Fax number:+ 993 12 344678</p>		<p>-Environment and Climate Action: https://eeas.europa.eu/delegations/turkmenistan/area/projects_en</p>
6.6	Delegation of the European Union to Uzbekistan	Uzbekistan	<p>International Business Centre, 107B Amir Temur Street, 15th floor 100 084 Tashkent Uzbekistan +998 71 120 16 01/02/03/04 delegation-uzbekistan@eeas.europa.eu</p>		<p>- Environment and Climate Action: https://eeas.europa.eu/delegations/uzbekistan/area/projects_en</p>

7	The Global Environment Facility (GEF)			The Global Environment Facility was established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems. Today, the GEF is an international partnership of 183 countries, international institutions, civil society organizations and the private sector that addresses global environmental issues.	<ul style="list-style-type: none"> - International Waters: https://www.thegef.org/topics/international-waters - Climate Change: https://www.thegef.org/topics/climate-change - Land degradation: https://www.thegef.org/topics/land-degradation
7.1	GEF Afghanistan	Afghanistan	Mr. Shah Zaman Maiwandi Operational Focal Point since 2018-01-16 Director General, National Environmental Protection Agency (NEPA) DarulAman Road, 6th District, School Street, NEPA New Building, Kabul 209, Afghanistan Tel: +93 0 749499999 Email: schah-zaman@gmx.com		<ul style="list-style-type: none"> - Climate change adaptation: https://www.thegef.org/news/water-gift-life-returns-safar-khan-renewed-prosperity-and-hope-rural-families-herat-afghanistan
7.2	GEF Kazakhstan	Kazakhstan	Mr. Gani SADIBEKOV Operational Focal Point since 2016-09-02 Political Focal Point since 2016-09-02 Vice-Minister, Ministry of Energy of the Republic of Kazakhstan Block A. 19, Kabanbay batyr ave., Orynbor Str., 8, House of Ministries Astana 010000, Kazakhstan Tel: +8 7172 74 00 75/ 8 7172 74 00 97 Fax: +8 7172 74 08 02 Email: g.sadibekov@energo.gov.kz		
7.3	GEF Kyrgyzstan	Kyrgyzstan	Mr. Abdykalyk RUSTAMOV Operational Focal Point since 2017-01-05 Director, State Agency on Environment Protection and Forestry 142 Gorkogo street Bishkek 720005, Kyrgyz Republic Tel: +996 312 90 06 95 Fax: +966 312 44		

			16 26 Email: min-eco@elcat.kg		
7.4	GEF Tajikistan	Tajikistan	Mr. Khayrullo Ibodzoda Operational Focal Point since 2014-01-17 Political Focal Point since 2014-01-17 Chairman of the Committee Committee of Environmental Protection 5/1 Shamsi Street Dushanbe 734003, Tajikistan Tel: + 992 37 2 36 4059 Fax: 011 992 37 2 36 1353 Email: muhit@hifzitariyat.tj; anvar.homidov@gmail.com; ibodzoda@mail.ru		
7.5	GEF Turkmenistan	Turkmenistan	Mr. Batyrmyrat Orazmyradov Political Focal Point since 2018-08-02 Chairman, State Committee for Environment and Land Resources of Turkmenistan Archabil 92, Ashgabat 744000, Turkmenistan Tel: +99312 447801 Fax: +99312 447868 Email: bbnpt@yandex.ru Mr. Berdi Berdiyev Operational Focal Point since 2018-08-02 Head of the Department of International Relations and Planning State Committee on Environment Protection and Land Resources of Turkmenistan #92, Archabil Ave., Ashgabat 744000, Turkmenistan Tel: +993 12 447850 Fax: +993 12 777855 Email: berber1133@gmail.com		

7.6	GEF Uzbekistan	Uzbekistan	<p>Mr. Bakhrom Kuchkarov Political Focal Point since 2018-05-22 Chairman, The State Committee on Ecology and Environmental Protection of the Republic of Uzbekistan 2A, Tuytepa Street, Tashkent 100047 Republic of Uzbekistan Tel: +998 71 207 07 70 ext. 1001# Email: bkuchkarov@uznature.uz</p> <p>Mr. Nodirjon Yunusov Operational Focal Point since 2018-05-22 Head of Department The State Committee on Ecology and Environmental Protection of the Republic of Uzbekistan, 2A, Tuytepa Street Tashkent 100047, Republic of Uzbekistan Tel: +998 71 207 07 70 ext.1111# Email: n.yunusov@uznature.uz</p>		
8	The Green Climate Fund (GCF)	Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	<p>Songdo Business District 175 Art center-daero Yeonsu-gu, Incheon 22004 Republic of Korea +82.32.458.6059 Email: info@gcfund.org</p>	<p>GCF was set up by the 194 countries who are parties to the United Nations Framework Convention on Climate Change (UNFCCC) in 2010, as part of the Convention's financial mechanism. It aims to deliver equal amounts of funding to mitigation and adaptation, while being guided by the Convention's principles and provisions.</p> <p>When the Paris Agreement was reached in 2015, GCF was given an important role in serving the agreement and supporting the goal of keeping climate change well below 2 degrees Celsius.</p>	<p>- Enhancing Climate Resilience in the Third Pole: https://www.greenclimate.fund/documents/20182/893456/15790_-_Enhancing_Climate_Resilience_in_the_Third_Pole.pdf/8e89f249-619d-4678-aad2-910582c2104d</p> <p>- Climate Adaptation and Mitigation Program for the Aral Sea Basin (CAMP4ASB): https://www.greenclimate.fund/projects/fp014</p> <p>- Scaling Up Hydropower Sector Climate Resilience:</p>

					https://www.greenclimate.fund/projects/fp040 - Scaling-Up Climate-Resilient Practices in Agriculture and Water Management: https://www.greenclimate.fund/documents/20182/893456/17460 - Scaling-Up Climate-Resilient Practices in Agriculture and Water Management in Turkmenistan. pdf/3cb6f1ec-18f9-4dcd-b78d-7060a86b3c21 - Water Supply System Development: https://www.greenclimate.fund/documents/20182/893456/17020 - Western Uzbekistan Water Supply System Development Project.pdf/b169d728-9685-49a8-80bb-29b3850ebf8e
9	The Asian Development Bank (ADB)	Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	Headquarters 6 ADB Avenue, Mandaluyong City 1550, Metro Manila, Philippines Tel: +63 2 632 4444 Fax: +63 2 636 2444	Focus Areas of ADB include: <ul style="list-style-type: none"> • Infrastructure, including energy, transport and communications, water supply and sanitation, and urban development. • Environment, Climate Change, and Disaster Risk Management – Environmental sustainability is seen as a prerequisite for economic growth and poverty reduction in Asia and the Pacific according to ADB's long-term strategic framework for 2008-2020. 	Central Asia Regional Economic Cooperation (CAREC) Program is a partnership of 11 countries (Afghanistan, Azerbaijan, People's Republic of China, Georgia, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan), supported by 6 multilateral institutions,

					working together to promote development through cooperation, leading to accelerated growth and poverty reduction. https://www.adb.org/countries/subregional-programs/carec https://www.carecprogram.org/
9.1	Afghanistan Resident Mission	Afghanistan	Afghanistan Resident Mission (AFRM) - Asian Development Bank (ADB) Asian Development Bank, P.O. Box 3070, Kabul, Afghanistan Tel. +93 20 2210301 to 4	ADB will base its operations on three strategic pillars: (i) expanded access for women and men to economic opportunities, markets, and services; (ii) stronger institutions and human capacities; and (iii) increased environmental sustainability, climate change resilience, and disaster resilience. ADB operations will continue to focus on its three priority sectors - energy, transport, and agriculture and natural resources.	- Water resource management: https://www.adb.org/projects/country/afg/status/active-1367/status/closed-1361?terms=water - Agriculture, natural resources and rural development: https://www.adb.org/projects/country/afg/sector/agriculture-natural-resources-and-rural-development-1057
9.2	Kazakhstan Resident Mission	Kazakhstan	Kazakhstan Resident Mission (KARM) - Asian Development Bank (ADB) Astana Office 12 SamalMicrodistrict, Astana Tower Business Center, 20th Floor Astana 010000, Kazakhstan Tel: +7 717 2709707 / Local: 5506 Fax: +7 717 2328343	ADB's operations will add value to the economy by creating jobs and providing broad knowledge-based support. Private sector investment and development, knowledge transfer, innovation support, and capacity building will drive the diversification agenda, complement public sector investment projects, and help develop inclusive and climate-proofed infrastructure.	- Water resource management: https://www.adb.org/projects/country/kaz?terms=water - Agriculture, natural resources and rural development: https://www.adb.org/projects/country/kaz/sector/agriculture-natural-resources-

					and-rural-development-1057
9.3	Kyrgyz Republic Resident Mission	Kyrgyzstan	<p>Kyrgyz Republic Resident Mission (KYRM) - Asian Development Bank (ADB)</p> <p>Orion Business Center, 21 Erkindik Prospect, 6th Floor, 720040 Bishkek, Kyrgyz Republic Tel: +996 312 986561 Fax: +996 312 986761</p>	<p>The Kyrgyz Republic's CPS, 2018–2022 aims to support growth and economic diversification, improve access to public and social services, and leverage regional cooperation. ADB will support agricultural services, climate resilience, and disaster risk reduction focusing on water resources. Environmental sustainability will be pursued by tackling the impacts of climate change and building climate and disaster resilience.</p>	<p>- Water resource management: https://www.adb.org/projects/country/kgz?terms=water+resources&=%EF%80%82</p>
9.4	Tajikistan Resident Mission	Tajikistan	<p>Tajikistan Resident Mission (TJRM) - Asian Development Bank (ADB)</p> <p>45 Sovetskaya Street, Dushanbe 734001, Tajikistan Tel: +992 372 271895 / 271897 / 210558 Fax: +992 372 289128</p>	<p>ADB for Tajikistan will help the government to achieve sustained and inclusive growth that is less susceptible to external shocks and create higher-paying jobs through:</p> <ul style="list-style-type: none"> •continue infrastructure investments in energy and transport where ADB has had a lead role and initiate support for integrated urban development; •sequence investment climate reforms, technical and vocational education and training (TVET), backed with knowledge work focusing on economic diversification; and •integrate food security with value-chain development, water resources management, and climate change adaptation targeting poorer regions (oblasts). 	<p>- Water resource management: https://www.adb.org/projects/country/taj?terms=water+resources&=%EF%80%82</p> <p>- Agriculture, natural resources and rural development: https://www.adb.org/projects/country/taj/sector/agriculture-natural-resources-and-rural-development-1057?terms=&=%EF%80%82</p>

9.5	Turkmenistan Resident Mission	Turkmenistan	<p>Turkmenistan Resident Mission (TKRM) - Asian Development Bank (ADB)</p> <p>82, 1972 (Ataturk) Street, Berkarar Business Center Building, Office M1, Ashgabat 744036, Turkmenistan Tel: +993 12 468730 Fax: +993 12 468731</p>	<p>ADB in Turkmenistan outlined three major avenues of support in Turkmenistan: (i) hydrocarbon market diversification and energy trade promotion, (ii) diversification of the non-hydrocarbon sectors through transport infrastructure investment to improve market connectivity and private sector development, and (iii) knowledge work on economic diversification and reforms, as derived from the government development objectives.</p>	<p>- Environmentally sustainable growth: https://www.adb.org/projects/country/tkm/theme/environmentally-sustainable-growth-1666?terms=</p>
9.6	Uzbekistan Resident Mission	Uzbekistan	<p>Uzbekistan Resident Mission (URM) - Asian Development Bank (ADB)</p> <p>1 Qoratosh Street, Tashkent 100027, Uzbekistan Tel: +998 71 1401920 to 1925 Fax: +998 71 1401976</p>	<p>ADB's country operations business plan for Uzbekistan includes operational support for transport, energy, municipal services, and access to finance. Support for the key drivers of change - private sector development and operations, regional cooperation and governance and reforms, knowledge management, gender equity, and climate change and the environment - is integrated into the sector-based operational assistance. Stand-alone technical assistance is proposed for demand-led reforms and the creation of knowledge solutions in key areas.</p>	<p>- Water resource management: https://www.adb.org/projects/country/uzb?terms=wate&=%EF%80%82</p> <p>- Agriculture, natural resources and rural development: https://www.adb.org/projects/country/uzb/sector/agriculture-natural-resources-and-rural-development-1057</p>
10.	The Asian Infrastructure Investment Bank (AIIB)	Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan	<p>AIIB Headquarters</p> <p>B-9 Financial Street, Xicheng District, Beijing 100033, China Tel: +86 10 8358 0000</p> <p>Information Requests: Fax: +86 10 83580005 Email: information@aiib.org</p>	<p>AIIB offers financing for sound and sustainable projects in energy and power, transportation and telecommunications, rural infrastructure and agriculture development, water supply and sanitation, environmental protection, and urban development and logistics. AIIB identifies the following three</p>	<p>- Tajikistan - Nurek Hydropower Rehabilitation: https://www.aiib.org/en/projects/approved/2017/nurek-hydropower-rehabilitation-project.html</p>

				<p>topics as their priorities:</p> <ul style="list-style-type: none">• Sustainable Infrastructure: promoting green infrastructure and supporting countries to meet their environmental and development goals.• Cross-country Connectivity: prioritizing cross-border infrastructure, ranging from roads and rail, to ports, energy pipelines and telecoms across Central Asia.• Private Capital Mobilization: devising innovative solutions that catalyze private capital, in partnership with other MDBs, governments, private financiers and other partners.	
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Annex IV.III List of Bilateral development partners

#	Donor organization	Central Asian territorial scope	Contacts	Description	Focus directions related to water resources
1.	Swiss Agency for Development and Cooperation (SDC)	Kyrgyzstan, Tajikistan and Uzbekistan	<p>Swiss Cooperation Office and Consular Agency 3, Tolstoy Street, 734003 Dushanbe Tajikistan Phone: +992 37 224 73 16, +992 37 224 38 97 +992 37 224 19 50 Fax +992 44 600 54 55 dushanbe@eda.admin.ch Embassy of Switzerland 21 Erkindikblvrd. Bishkek 720040 , Kyrgyzstan Phone: +996 312 30 10 36 Fax: +996 312 30 36 77 bishkek@eda.admin.ch</p>	<p>Switzerland supports regional and national water management programmes in the three Central Asian states of Kyrgyzstan, Tajikistan and Uzbekistan. In Kyrgyzstan and Tajikistan, Switzerland's support also focuses on public and health sector reforms and efforts to develop the private sector.</p>	<p>- Water - supporting dialogue and cooperation in the region through the «Blue Diplomacy» approach, improving access to drinking water in rural areas and supporting disaster-risk reduction activities: https://www.eda.admin.ch/deza/en/home/themes-sdc/water.html</p>
2.	USAID Central Asia	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.	<p>Mission Contact Christopher Edwards, Regional Mission Director 41 Kazibek bi St Almaty, Kazakhstan Phone Phone +7 (727) 250-76-12</p>	<p>Nearly 25 years after initiating programs in Central Asia, USAID remains vitally involved leading regional development programs focusing on trade and markets, energy and water, and good governance and social sector improvements in Central Asia.</p>	<p>Enhanced regional cooperation on shared energy and water resources. The fortunes of Central Asian economies largely depend on water and energy to power economic growth and satisfy the demand for resources. The management and storage of cross-border water and other energy resources requires regional cooperation. Our programs help convert the issues of water and energy to be</p>

					compelling reasons for cooperation, instead of sources of conflict, resulting in more effective and equitable management of these two critical trans-boundary resources.
2.1	USAID Afghanistan	Afghanistan	<p>Mission Contact USAID/Afghanistan Great Masood Road Kabul, Afghanistan Phone: +93 (0) 700-10-8000 Email: KBLAIDDOCInformation@usaid.gov</p> <p>USAID/Office of Afghanistan and Pakistan Affairs 1300 Pennsylvania Avenue, NW Rm. 5.6-027 Washington, DC, 20523, USA Email: infoafghanistan@usaid.gov</p>	USAID's focus includes investing in energy, industries and capacities that will generate broad-based and inclusive economic growth and improve security.	<p>- Infrastructure - water and sanitation: https://www.usaid.gov/afghanistan/infrastructure</p> <p>- Agriculture: https://www.usaid.gov/afghanistan/agriculture</p>
2.2	USAID Kazakhstan	Kazakhstan	<p>Mission Contact</p> <p>Alexander Lane, Kazakhstan Country Office Director USAID/Central Asia RakhymzhanKoshkarbayev Avenue, No. 3. Astana, Kazakhstan, 010010 Phone +7 (7172) 70-21-00.</p> <p>USAID Contact Eric Rudenshiold, Sr. Officer-in-Charge U.S. Agency for International</p>	To enhance security and prosperity, USAID partners with Kazakhstan's government, private sector and people on combatting infectious diseases, fostering inclusive governance institutions that respond to citizens' needs, expanding diverse and competitive trade, and promoting regional cooperation on shared energy and water resources. As part of the USAID Mission to Central Asia, USAID in Kazakhstan advances the U.S. Government's New Silk Road	<p>- Environment and Global Climate Change: https://www.usaid.gov/kazakhstan/environment-and-global-climate-change</p>

			<p>Development 1300 Pennsylvania Avenue, NW Washington, DC, 20523, USA Phone (202) 712-0141</p>	<p>initiative, which increases connections between Central and South Asia — including Afghanistan — to foster greater stability and prosperity across the region.</p>	
2.3	USAID Kyrgyz Republic	Kyrgyzstan	<p>Mission Contact Gary Linden, Mission Director USAID/Kyrgyz Republic 171 ChyngyzAitmatov Ave. Bishkek, Kyrgyzstan, 720016 Phone: +996 (312) 597000 Fax: +996 (312) 597744 Email: akdocs@usaid.gov</p> <p>USAID Contact Kyung (KC) Choe, Deputy Director, Office of South and Central Asia Affairs U.S. Agency for International Development (USAID) 1300 Pennsylvania Avenue NW Washington, DC, 20523, United States of America Phone: +1 202 712 4550 Email: kchoe@usaid.gov</p>	<p>USAID works with the Kyrgyz Republic to build on progress in democratic governance by partnering with institutions, promoting civic engagement, improving delivery of public services and expanding economic opportunity. USAID in the Kyrgyz Republic also works with the regional USAID Mission to Central Asia to advance the U.S. Government’s New Silk Road initiative, which increases connections between Central and South Asia — including Afghanistan — to foster greater stability and prosperity across the region.</p>	<p>- Environment: https://www.usaid.gov/kyrgyz-republic/environment</p> <p>- Agriculture and Food Security: https://www.usaid.gov/kyrgyz-republic/agriculture-and-food-security</p>
2.4	USAID Tajikistan	Tajikistan	<p>Mission Contact Paul Richardson, Acting Country Director 109 “A” IsmoiliSomonl Ave. Dushanbe, Tajikistan, 734019 Phone: 10-922-372-229-2000</p> <p>USAID Contact Eric Rudenshiold, Sr. Officer in Charge U.S. Agency for International Development</p>	<p>USAID promotes economic growth, democracy, education, health and food security in Tajikistan. As part of the USAID Mission to Central Asia, USAID in Tajikistan advances the U.S. government’s New Silk Road initiative, which increases regional connections between the economies and peoples of Central and South Asia — including Afghanistan — to foster greater stability and prosperity.</p>	<p>- Water and sanitation: https://www.usaid.gov/tajikistan/water-and-sanitation</p> <p>- Agriculture and Food Security: https://www.usaid.gov/tajikistan/agriculture-and-food-security</p>

			1300 Pennsylvania Avenue, NW Washington, DC, 20523, USA Phone: (202) 712-0141 Email: erudenshiold@usaid.gov		
2.5	USAID Turkmenistan	Turkmenistan	<p>Mission Contact MischereKawas, Country Director Business Center, A Block 1 YunusEmre St, “Mir 2/1” Ashgabat, Turkmenistan, 744017 Phone: 993-12-456-130</p> <p>USAID Contact Eric Rudenshiold, Sr. Officer in Charge U.S. Agency for International Development 1300 Pennsylvania Avenue, NW Washington, DC, 20523, USA Phone: (202) 712-0141 Email: erudenshiold@usaid.gov</p>	USAID works with the people, private sector and Government of Turkmenistan to strengthen and diversify the economy, build up nascent civil society institutions, increase good governance and expand access to health care services. As part of the USAID Mission to Central Asia, USAID in Turkmenistan also supports regional goals, including under the U.S. Government’s New Silk Road initiative, which increases regional connections between the economies and peoples of Central and South Asia — including Afghanistan — to foster greater stability and prosperity.	- Agriculture and Food Security: https://www.usaid.gov/turkmenistan/agriculture-and-food-security
2.6	USAID Uzbekistan	Uzbekistan	<p>Mission Contact Gary Robbins, Country Director 3 Moyorqorghon St, 5th Block Yunusobod District Tashkent, Uzbekistan, 70093 Phone: +998 (71) 120-63-09</p> <p>Eric Rudenshiold, Sr. Officer in Charge U.S. Agency for International Development 1300 Pennsylvania Avenue, NW Washington, DC, 20523, USA Phone: (202) 712-0141 Email: erudenshiold@usaid.gov</p>	USAID helps Uzbekistan diversify its economy and increase regional trade, address serious health threats and encourage the government to be more responsive to its people’s needs. As part of the USAID Mission to Central Asia, USAID in Uzbekistan advances the U.S. Government’s New Silk Road initiative, which increases regional connections among the economies and peoples of Central and South Asia — including Afghanistan — to foster greater regional stability and prosperity.	- Agriculture and Food Security: https://www.usaid.gov/uzbekistan/agriculture-and-food-security

3.1	JICA in Afghanistan	Afghanistan	JICA Afghanistan Office Central Post Office Box 461, Kabul, Afghanistan Tel: +93-700-095505 E-mail: an_oso_rep@jica.go.jp	The greatest focus of JICA's support to Afghanistan is in creating infrastructure, particularly in the metropolitan area of the capital Kabul, and agricultural and rural development.	- Agriculture and Rural Development Program - Development of Water Supply Facilities
3.2	JICA in Kyrgyz Republic	Kyrgyzstan	JICA Kyrgyz Republic Office 15, Razzakov str., Bishkek, 720040, Kyrgyz Republic Tel: (996-312) 900270 Fax: (996-312) 900279	With the objective of promoting poverty reduction through economic growth based on market reform, JICA is providing cooperation, as the primary base for economic growth, to transportation infrastructure, agricultural and rural development, and human resource development for making the transition to a market economy.	- Sustainable Development Goals - Agriculture
3.3	JICA in Tajikistan	Tajikistan	JICA Tajikistan Office 4th floor and 5th floor, Serena Office Complex, 14 Rudaki Avenue, 734013, Dushanbe, Tajikistan Tel: (992) 37-8812633 / 34 / 35	JICA is providing cooperation to build roads that connect to the Afghanistan border, to make improvements in the water supply and in the systems for farming guidance and maternal and child healthcare, as well as cooperation that relates to rural development in regions near the Afghanistan border.	- Water resources: https://www.jica.go.jp/tajikistan/english/activities/water.html - Agriculture and Irrigation: https://www.jica.go.jp/tajikistan/english/office/topics/180831.html
3.4	JICA in Uzbekistan	Uzbekistan	5th Floor, International Business Center, 107-B, Amir Temur Ave., Tashkent 100084 Uzbekistan Tel: (998-71) 120 79 66/67 ; (998-71) 238 59 16/17/18/19 Fax: (998-71) 120 79 68	JICA provides cooperation for power generation and railroad projects, for human resource development in local businesses through the Uzbekistan-Japan Center For Human Development, for improvement in the legal infrastructure for business activities, and for agriculture and health care.	

4.	Helvetas – Swiss Association for International Cooperation	Kyrgyzstan and Tajikistan	Office Zurich Weinbergstrasse 22a, 8021 Zürich Phone: +41 44 368 65 00 Fax: +41 44 368 65 80 E-Mail: info@helvetas.org	Helvetas is an independent Swiss development organization that is building capacity in Africa, Asia, Latin America and Eastern Europe. It implements development projects in the areas of water and sanitation, agriculture and nutrition, education, economic development, democracy and peace, and climate and the environment.	<ul style="list-style-type: none"> - Water: https://www.helvetas.org/en/switzerland/what-we-do/our-topics/water - Environment and Climate Change: https://www.helvetas.org/en/switzerland/what-we-do/our-topics/climate-change - Skills Development and Education: https://www.helvetas.org/en/switzerland/what-we-do/our-topics/skills-development-education
4.1	HELVETAS Kyrgyzstan	Kyrgyzstan	HELVETAS Kyrgyzstan 65, St. 7 Liniya, Intersection St.Gagarina, 720044 Bishkek Phone: +996 312 21 45 72/73/74/75 E-Mail: kyrgyzstan@helvetas.org	The difficult climate conditions and scarcity of water make life hard for farmers in Kyrgyzstan. Helvetas supports farmers in the production and marketing of new products to improve their income. It also provides vocational training, help mitigate conflicts over water and advise municipalities on improving public services.	<ul style="list-style-type: none"> - The Irrigation Water Integrity Project: https://www.helvetas.org/en/kyrgyzstan/what-we-do/how-we-work/our-projects/Asia/Kyrgyzstan/kyrgyzstan_iwip '- WAPRO – Multi-stakeholders join forces to enhance water productivity (Kyrgyzstan and Tajikistan): https://www.helvetas.org/en/tajikistan/what-we-do/how-we-work/our-projects/Asia/Kyrgyzstan/global-water-productivity-WAPRO

4.2	HELVETAS Tajikistan	Tajikistan	<p>HELVETAS Tajikistan</p> <p>Bukhoro St. 2a, 734025 Dushanbe Phone: +992 37 221 5242 E-Mail: tajikistan@helvetas.org</p>	<p>Helvetas is improving economic prospects in selected areas of Tajikistan by providing access to markets as well as supporting the national water reforms and legal aid for socially disadvantaged strata of society.</p>	<p>- Water for sustainable development: https://www.helvetas.org/en/tajikistan/what-we-do/how-we-work/our-projects/Asia/Tajikistan/tajikistan-water</p> <p>'- WAPRO – Multi-stakeholders join forces to enhance water productivity (Kyrgyzstan and Tajikistan): https://www.helvetas.org/en/tajikistan/what-we-do/how-we-work/our-projects/Asia/Kyrgyzstan/global-water-productivity-WAPRO</p>
5.	The Aga Khan Development Network (AKDN)	Afghanistan, Kazakhstan, Kyrgyzstan and Tajikistan	<p>Aga Khan Development Network (AKDN)</p> <p>1-3 Avenue de la Paix, 1202 Geneva, Switzerland. Tel: +41 22 909 7200; E-mail: info@akdn.org</p>	<p>AKDN is a network of private, international non-denominational development agencies. They work to improve the welfare and prospects of people in the developing world, particularly in Asia and Africa.</p>	<p>- Agriculture and food security: https://www.akdn.org/what-we-do/agriculture-and-food-security-0</p> <p>- Education: https://www.akdn.org/what-we-do/education</p>
6.	The Federal Ministry for Economic Cooperation and Development (BMZ)	Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	<p>Federal Ministry for Economic Cooperation and Development</p> <p>Postfach 12 03 22, 53045 Bonn Phone: +49 / (0)228 / 9 95 35-0 Fax: +49 / (0)228 / 9 95 35-35 00</p> <p>Stresemannstraße 94, 10963 Berlin</p>	<p>The Federal Ministry for Economic Cooperation and Development (BMZ) is a cabinet-level ministry of the Federal Republic of Germany. The Ministry works to encourage economic development within Germany and in other countries through international cooperation and partnerships. The German government is actively engaged, in close cooperation with the</p>	<p>- Water: http://www.bmz.de/en/issues/wasser/index.html</p> <p>- Agriculture and climate: http://www.bmz.de/en/issues/klimaschutz/agriculture-and-climate/index.html</p> <p>- Climate change and development: http://www.bmz.de/en/issues/klimaschutz/i</p>

			Phone: +49 / 30 / 1 85 35-0 Fax: +49 / 30 / 1 85 35-25 02	international community, in combating poverty, securing food, establishing peace, freedom, democracy and human rights, shaping globalisation in a socially equitable manner, and preserving the environment and natural resources.	index.html - Disaster risk management: http://www.bmz.de/en/issues/naturkatastrophen/index.html - Water and climate: http://www.bmz.de/en/issues/klimaschutz/water-and-climate/index.html
7.	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)	Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	Postal address: 11055 Berlin, Germany Delivery address Stresemannstraße 128 – 130, (via Erna-Berger-Straße) 10117 Berlin, Germany Visitors' addresses Stresemannstraße 128 – 130 10117 Berlin, Germany Tel.: +49 30 18 305-0 Email for offices, agencies and departments: poststelle@bmu.bund.de Secure De-Mail: zentrale@bmub.de -mail.de	The Ministry is working to protect the public from environmental toxins and radiation and to establish an intelligent and efficient use of raw materials, to advance climate action and to promote a use of natural resources that conserves biodiversity and secures habitats.	- Water management: https://www.bmu.de/en/topics/water-waste-soil/water-management/ - Education and participation: https://www.bmu.de/en/topics/education-participation/
8.	The Federal Ministry for Education and Research (BMBF)	Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan		BMBF supports innovative projects and ideas in research through targeted funding programmes. Funding is provided for projects in a wide spectrum of research areas. The range covers everything from basic research in natural sciences, environmentally friendly sustainable development, new technologies, information and communication technologies, the life sciences, work design, structural research funding at institutions of	- Research on Environment and Climate: https://www.bmbf.de/en/environment-and-climate-2307.html - Research for Sustainable Development (FONA): https://www.fona.de/en/research-for-sustainable-

				higher education to innovation support and technology transfer. Its responsibility in the area of education addresses every stage of human life, beginning with early childhood learning through to continuing education and lifelong learning.	development-fona-17833.html
9.	GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit		<p>Friedrich-Ebert-Allee 36 + 40, 53113 Bonn Telefon: +49 228 44 60-0 Fax: +49 228 4460-17 66</p> <p>Dag-Hammarskjöld-Weg 1-5, 65760 Eschborn Telefon: +49 6196 79-0 Fax: +49 6196 79-11 15 Email: info@giz.de</p>	<p>For more than 30 years, capacity development has been one of the key services delivered by GIZ and its predecessors.</p> <p>GIZ supports people in acquiring specialist knowledge, skills and management expertise. It helps organisations, public authorities and private businesses to optimise their organisational, managerial and production processes. It advises governments on how to achieve objectives and implement nationwide change processes by incorporating them into legislation and strategies.</p>	<p>- Rural development - water and agriculture: https://www.giz.de/en/downloads/giz2015_en_Advisory_service_Water_and_agriculture_Product_079.pdf</p> <p>- Sustainable infrastructure - water: https://www.giz.de/en/our-services/sustainable_infrastructure.html</p>
9.1	GIZ Office Afghanistan		<p>Country Director: Carsten Schmitz-Hoffmann</p> <p>Kabul, Afghanistan Email: giz-afghanistan@giz.de</p>	<p>In response to the country's diverse problems, the German and Afghan governments have agreed to focus on the following priority areas:</p> <ul style="list-style-type: none"> —Good governance —Sustainable economic development (incl. Technical/Vocational Education and Training) —Urban development and municipal infrastructure (incl. Energy and Water) —Other areas of cooperation (incl. Education, Monitoring and Evaluation, Communication) 	<p>- Improving access to drinking water and sanitation: https://www.giz.de/en/worldwide/14701.html</p> <p>- Supporting technical and vocational education and training in Afghanistan: https://www.giz.de/en/worldwide/14616.html</p>

				—Stabilization (only projects commissioned by the Federal Foreign Office)	
9.2	GIZ Office Kazakhstan		<p>GIZ Office Kazakhstan Country Director a. i.: Jörg Pudelka</p> <p>Nurly Tau, Block 1 A, Office 402, Al-Farabi Prospekt, 5, Almaty, Kazakhstan Email: giz-kasachstan@giz.de</p>	<p>GIZ is supporting the Kazakh Government in the fields of sustainable economic development, education and vocational training, good governance, the environment and climate, and health. It operates in Kazakhstan on behalf of the Federal Ministry for Economic Cooperation and Development, the Federal Foreign Office, the Federal Ministry of the Interior, the Federal Office of Administration, the Federal Ministry of Health, the Federal Ministry of Economics and Technology and the European Commission.</p>	<ul style="list-style-type: none"> - Transboundary water management in Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan): https://www.giz.de/en/worldwide/15176.html - Ecosystem-based adaptation to climate change in high mountainous regions of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan): https://www.giz.de/en/worldwide/40944.html - Strengthening of livelihoods through climate change adaptation in Kyrgyzstan and Tajikistan: https://www.giz.de/en/worldwide/28804.html - Sustainable and climate sensitive land use for economic development in Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan): https://www.giz.de/en/worldwide/14210.html

9.3	GIZ Office Kyrgyzstan		<p>Country Director: Thomas Labahn</p> <p>22, Erkindik Boulevard 720040, Bishkek Tel.: +996 (312) 90 90 70; +996 (312) 90 90 80 Email: giz-kirgisistan@giz.de</p>	<p>GIZ's other areas of activity in Kyrgyzstan are:</p> <ul style="list-style-type: none"> — improving primary and secondary education, reform of vocational training, training of managers — legal and judicial reform — transboundary dialogue on water resources management; support for sustainable natural resource management — assisting the Ministry of Youth Affairs to improve the prospects for young people in disadvantaged and conflict-prone areas — promoting civil society organisations through a fund for small-scale development projects — support for the German minority. 	
9.4	GIZ Office Tajikistan		<p>Country Director: Bernadette Neu Office address: Aini / Nazarshoev Str., 734042 Dushanbe, Tel.: +992 44 6006 107, +992 44 6006 788 Email: giz-tadschikistan@giz.de Postal Address N. Huvaydulloev Street 1/1 734049 Dushanbe, Tajikistan</p>	<p>On behalf of the German Federal Ministry for Economic Cooperation and Development, GIZ is implementing bilateral and regional projects, most of which currently support sustainable economic development or the health sector. Other projects focus on education, sustainable management of natural resources, tourism development, and the promotion of the rule of law.</p>	
9.5	GIZ Office Uzbekistan		<p>Country Director: Jörg Pudelka</p> <p>Chimkentskaya Str. 7a Mirabad District, 100029 Tashkent Tel.: +998 71 280 67 51, +998 71 280 67</p>	<p>GIZ is working hard to promote inclusive economic growth. By developing the private sector, the aim is to support the diversification of the economy and expand the upstream and downstream sectors of agriculture in</p>	

			52 Email: giz-usbekistan@giz.de	order to create jobs and income-generating opportunities, particularly in disadvantaged regions. GIZ is also coordinating the Manager Training Programme, which is financed by the German Federal Ministry for Economic Affairs and Energy.	
10.	Volkswagen Foundation	Available for all countries	Kastanienallee 35, 30519 Hannover Tel.: +49 (0)511 8381-0 Fax: +49 (0)511 8381-344 Email: info@volkswagenstiftung.de	The Volkswagen Foundation is an independent, non-profit organization that has been funding research projects in all disciplines since 1962. The foundation provides impetus for the development of research and higher education. There are two options for applicants from the abroad (outside of Germany): 1. Collaborative projects: In some funding initiatives, the Foundation provides funds for projects that are conducted by international research teams - it is necessary to partner up with someone based at a German university or research institute. 2. Individual scholarships: The Foundation offers different postdoctoral funding opportunities.	- Natural sciences / Engineering - Agronomy and Forestry - Environmental sciences - Higher education research Funding portfolio: https://www.volkswagenstiftung.de/en/funding/our-funding-portfolio-at-a-glance
11.	The German Development Bank (KfW)	Kyrgyzstan, Tajikistan and Uzbekistan	KfW Group Frankfurt: Palmengartenstrasse 5 - 9 60325 Frankfurt am Main, Germany Telephone: +49 69 7431-0 Fax: +49 69 7431-2944 KfW Development Bank Frankfurt: Telephone: +49 69 7431-4260 Fax: +49 69 74 31-3796 Email: info@kfw-entwicklungsbank.de	KfW Development Bank works with many countries in Asia on behalf of the German Federal Government to fight poverty and climate change and protect the environment: these efforts include increasing the use of renewable energy sources and preserving biodiversity.	- Water - drinking supply and sanitation: https://www.kfw-entwicklungsbank.de/International-financing/KfW-Development-Bank/Topics/Water/ - Environment and sustainability:

					https://www.kfw-entwicklungsbank.de/International-financing/KfW-Development-Bank/Topics/Environment-and-sustainability/
11.1	*no representation	Afghanistan		KfW has supported the Afghan government since 2002, specifically, improving the supply of energy, clean water and medical services and promoting sustainable economic development.	- Water supply: https://www.kfw-entwicklungsbank.de/PDF/Entwicklungsfiananzierung/Laender-und-Programme/Asien/Projekt-Afghanistan-Trinkwasser-2014-EN.pdf
11.2	KfW Office Bishkek	Kyrgyzstan	KfW Office Bishkek Director KfW Office: Dr. Ylva Renner-Haerberle Blvd. Erkindik 22 / ul. Moskovskaya 101/1 720040 Bishkek, Kyrgyz Republic Phone: +996 312 90 90 85-88 Fax: +996 312 90 90 89 Email: KfW.Bischkek@kfw.de	The main goal of German development cooperation is to improve the overall conditions for the private sector, enabling it to create urgently needed jobs. KfW Development Bank has designed a number of programmes intended to supply micro and small enterprises in rural areas with loans and improve their value creation. KfW also supports housing finance, so that low-to-medium income households can make urgently needed investments in the construction and renovation of their homes, thus enhancing their living conditions.	
11.3	KfW Office Dushanbe	Tajikistan	KfW Office Dushanbe Director KfW Office: Kerstin Laabs Ayni/Nazarshoev street 734042 Dushanbe, Tajikistan Phone: +992 44 600 67 70 Fax: +992 44 600 52 04 Email: kfw.duschanbe@kfw.de	Healthcare is a central task of KfW Development Bank in Tajikistan. At the same time it helps the government to establish a functioning finance sector, in particular to provide businesses and households in rural areas with loans. Most Tajiks live in	

				rural areas and earn their money in agriculture.	
11.4	KfW Office Tashkent	Uzbekistan	<p>KfW Office Tashkent Director KfW Office: Dr. Ylva Renner-Haerberle</p> <p>7 A., Chimkentskaya Str. 100029 Tashkent, Uzbekistan Phone: +99 871 280 6759 Fax: +99 871 280 6760 Email: kfw.taschkent@kfw.de</p>	Various projects designed to promote sustainable development in Uzbekistan have been almost fully completed. KfW Development Bank is now focusing on helping Uzbekistan to reform its health sector. The Uzbek government's goal is to provide modern health care that meets international standards.	
11.5	The French Development Agency (AFD)	Kazakhstan and Uzbekistan	<p>Regional office of Tashkent:</p> <p>25 Istiqbol street, 100047, Tashkent Tel: +998 71 233 66 69</p>	AFD is a bi-lateral development finance institution established in 1941 that works on behalf of the French government. Its main focus of activities is provision of financial assistance according to France's Overseas Development Assistance policies, including projects aimed at reducing poverty and inequalities, promoting sustainable economic growth, and preservation "Global Public Goods" of benefit to all humanity, including the fight against climate change and pandemics; the protection of biodiversity; the promotion of social and environmental responsibility.	