CENTRAL ASIA WATER AND ENERGY PROGRAM

CAWEP Annual Report 2019

CAWEP
CENTRAL ASIA WATER & ENERGY PROGRAM

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CAWEP Annual Report 2019

Contents

ACRONYMS AND ABBREVIATIONS

BETF	Bank-Executed Trust Fund
BT	Barki Tojik
CAHMP	Central Asia Hydrometeorology Modernization Project
CAMP4ASB	Climate Change Adaptation and Mitigation Program for Aral Sea Basin
CASA-1000	Central Asia-South Asia power project
CAWEP	Central Asia Water and Energy Program
CAREC	Central Asia Regional Economic Cooperation
CARECenv	Regional Environmental Center for Central Asia
CDC Energia	Coordinating Dispatch Center Energia
DABS	Da Afghanistan Breshna Sherkat
DFID	United Kingdom Department for International Development
EPM	Electricity Planning Model
EC-IFAS	Executive Committee of the International Fund for Saving the Aral Sea
ESCC	Energy Sector Coordinating Committee
EU	European Union
HPP	Hydropower plant
IFAS	International Fund for Saving the Aral Sea
IWRM	Integrated water resource management
JSC	Joint-stock company
PACT	Program for Asia Connectivity and Trade
RETF	Receipient-Executed Trust Fund
SECO	State Secretariat for Economic Affairs of Switzerland
SDC	Swiss Agency for Development and Cooperation
TUTAP	Turkmenistan-Uzbekistan-Tajikistan-Afghanistan-Pakistan power interconnection project financed by the Asian Development Bank
UK	United Kingdom
USAID	United States Agency for International Development
WRM	Water resource management
WSS	Water supply and sanitation

EXECUTIVE SUMMARY

This report describes the activities and management of the Central Asia Water and Energy Program (CAWEP) for the period of January 1–December 31, 2019. It is the second Annual Report for the third phase (2018–2022) of the program.

About CAWEP

CAWEP commenced in 2009 as the Central Asia Energy-Water Development Program and was renamed in 2019. It is a multi-donor trust fund managed by the World Bank with a US$12.6 million funding envelope, comprising (chronologically) US$3.5 million from the Swiss State Secretariat for Economic Affairs (SECO), US$1.0 million from the UK Department for International Development (DFID), and €7.0 million from the European Union.

Program design for the third phase was informed by lessons from prior phases, and the program development objective was adjusted to emphasize water security more broadly and enabling environment strengthening at both regional and national levels. The program development objective is ***to strengthen the enabling environment to promote water and energy security at regional level and in the beneficiary countries***. This aligns with the World Bank's regional engagement framework that aims to strengthen connectivity and increase the economic value of water and energy resources in the region.

The program's long-term vision is to promote sustainable development and livelihood security across the region. It thus finances initiatives that (i) support improvements in water and energy management and development, (ii) strengthen national and regional institutions, and (iii) facilitate regional dialogue on water and energy security in order to advance regional cooperation on sustainable development and climate resilience. By the end of December 2022, the program aims to have:

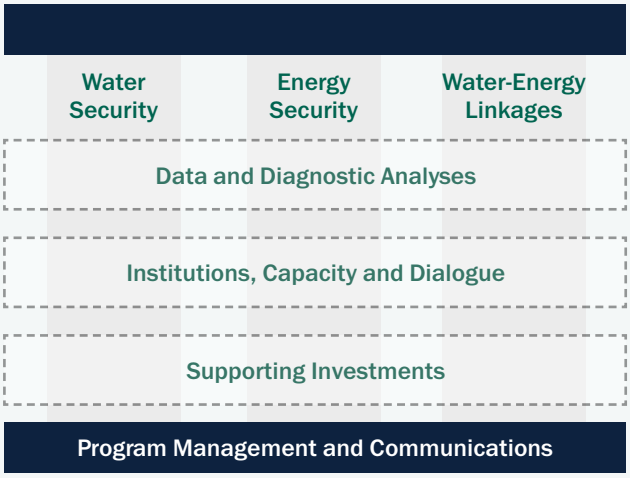


FIGURE 1. CAWEP PILLAR AND THEME STRUCTURE

- Improved national policy frameworks that guide water and energy security improvements;
- Informed a regional framework for water and/or energy security;
- Strengthened regional and national institutional capacity for water and energy management; and
- Leveraged/informed US$2.5 billion (US$0.8 billion for the third phase) of World Bank investments that improve national and regional water and energy security.

The program has three pillars and three cross-cutting themes (Figure 1). Pillar structure and content have been adjusted to focus on facilitating water and energy security, and the linkages between them. The Water Security Pillar promotes sustainable and efficient use of shared water resources and integrated water resources management (IWRM). The Energy Security Pillar promotes the security and economic efficiency of energy supply from national to regional level, and the Water-Energy Linkages Pillar guides management of the water-energy nexus and climate-change adaptation efforts that link two or more countries.

An increased emphasis has been placed on building institutional capacity, and on dialogue to catalyze investments. National activities are recognized as important building blocks for regional water and energy security, and Afghanistan has been formally included as a beneficiary country of the program.

Regional Context

Water and energy systems in Central Asia are intertwined but poorly coordinated, creating water-energy nexus challenges. Transboundary rivers, including the Amu Darya and Syr Darya, interconnect Central Asian countries and Afghanistan, and the extensive irrigation systems of the region span national borders. In the past, electricity generated from fossil fuels in the downstream areas, met winter energy demands in the upstream areas, enabling reservoir storage of winter flows for subsequent release for summer irrigation. National borders thus pose significant challenges for optimal operation of water infrastructure. Most of the water and hydropower infrastructure requires rehabilitation for improved water productivity and energy efficiency, and for intra- and inter-regional energy trade.

Achieving sustainable growth in Central Asia in the context of significant population growth requires effective management of natural resources. Water productivity across the region is extremely low and more economically efficient use of water could both increase agricultural productivity, and support broader economic growth, including through increased hydropower production and trade.

Damien Pearson from Rubicon Water presents Australian experience in modernization of canals at the regional workshop on irrigation modernization on November 19, 2019, in Almaty, Kazakhstan.

In 2018, the presidents of Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan, and a high-level representative of Turkmenistan, met in Nur-Sultan for the first time in nearly a decade. 2019 was characterized by dynamic regional and national geopolitics. Nine Central Asia Regional Economic Co-operation (CAREC) member countries signed a historic ten-point declaration to accelerate cross-border co-operation on energy and promote creation of a regional energy market. The CAREC Energy Strategy will guide efforts until 2030 towards achieving regional energy security. Driven by regional economic growth, regional electricity demand will increase by 50 percent by 2030. Meeting this demand will require significant investment, as well institutional reforms and capacity development, all of which CAWEP is well placed to support.

Water and energy reforms at national level are generally progressing well, relations between countries are improving, and the appetite for regional dialogue is increasing. Nonetheless, countries are yet to articulate a shared vision for regional water and energy security. The capacity of regional institutions, which are mandated to tackle these issues, remains low, and institutional arrangements continue to be undermined by limited trust. The International Fund for Saving the Aral Sea (IFAS) – the only well-established institution mandated to facilitate regional cooperation on environmental sustainability and socio-economic development – is currently constrained as not all member countries are fully engaged. Central Asian countries accept the need to reform IFAS, some are however, reluctant to alter the status quo, and alternative suggestions for reform reflect different national interests.

CAWEP supports economic development across the region in ways mutually beneficial for all countries (for example, through IWRM, climate change adaptation, renewable energy) through regional discussions and knowledge exchange, networking youth, technical-level experts, academia and decision-makers. CAWEP efforts are closely aligned with the Bank's overall regional engagement and its strategic vision for the water and energy sectors in the region. CAWEP capitalizes on the Bank's ongoing policy dialogue with governments and the Bank's position as a trusted and neutral development partner. This allows CAWEP to explore opportunities for cross-border dialogue and activities that support country efforts to improve water and energy security. CAWEP analytical work and investment support helps Central Asian countries prioritize investment decisions and informs implementation of development finance.

2019 Focus Areas

The 2019 work plan included 27 activities: nine under the Water Security Pillar, nine under the Energy Security Pillar, seven under the Water-Energy Linkages Pillar, and supporting program management and communications. CAWEP builds on prior program phases with increased emphasis on national activities as building blocks for regional security. Regional technical and policy dialogue together with capacity building, remain important for promoting cooperation. Focus areas in 2019 for the three program pillars are shown in Figure 2.

FIGURE 2. CAWEP KEY FOCUS AREAS IN 2019

Water Security Pillar

- New efforts supporting water resources management across the region.
- Analysis of the irrigation sector in the region as the basis for formulating sector recommendations.
- Communication of key water security messages via a brochure (*Towards Water Secure Sustainable Economies*) to stimulate policy dialogue across the region.
- New work to strengthen water supply and sanitation regionally.
- Strengthening hydro-meteorological services including monitoring, forecasting and user-focused impact-based early warning of mountain hazards.
- Supporting water sector modernization, including promoting IWRM in Tajikistan with a focus on the Vakhsh River Basin.
- Strengthening Tajik-Afghan cooperation on hydro-meteorological services in the Panj River, including early warnings, climate change modelling, and glacier studies.

Energy Security Pillar

- Diversification into renewable energy in Uzbekistan and assessment of hydropower development in the Kyrgyz Republic.
- Broad measures to strengthen the financial standing and institutional capacity in Tajikistan.
- Continued capacity building and regional cooperation, including for the regional Coordinating Dispatch Center Energia and the dispatch centers of six beneficiary countries.
- Regional dialogue through engagement with the Central Asia Regional Economic Cooperation Program, and pursuit of regional integration and electricity trade.
- An exploration of the technical, operational, and legal requirements for integration of Afghanistan into the Central Asian power system.

Water-Energy Linkages Pillar

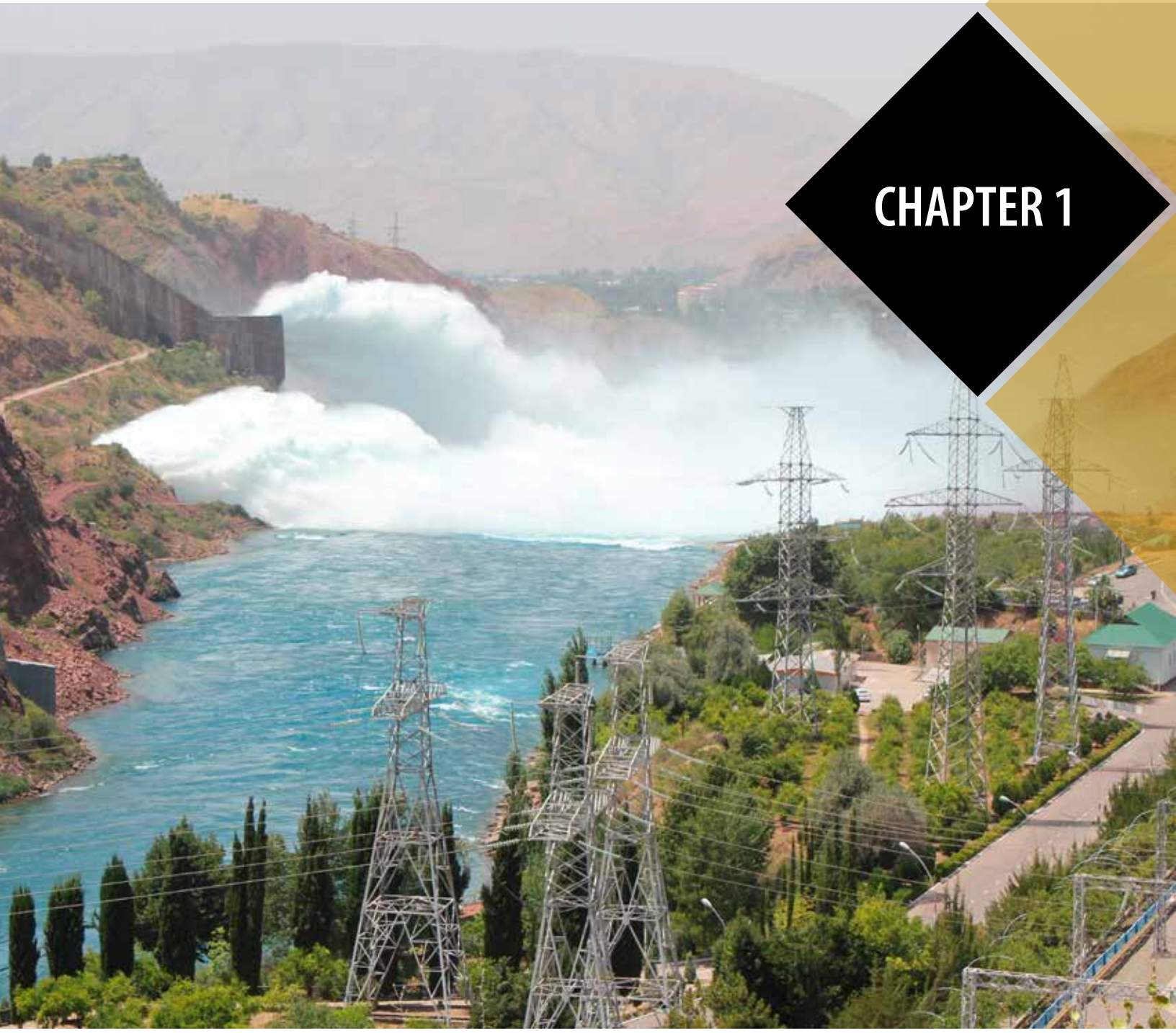
- New efforts for climate and integrated landscape actions in Tajikistan and the Kyrgyz Republic, and innovative solutions for environmental management in Kazakhstan and Uzbekistan.
- Analysis to support environmental management of the growing power sector investment in Tajikistan.
- Regional knowledge and capacity building in water resources management, energy and climate.

Program Allocations and Disbursements

In 2019, following EU funding contributions, CAWEP allocated an additional US$6.48 million to reach a total allocation of US$8.76 million. A total of 27 activities were supported in 2019, five of which were launched during the 2019 calendar year; one activity was completed during 2019. The first recipient-executed grant (to Tajikistan) was approved during 2019, under the Energy Security Pillar. Disbursements for 2019 were US$1.3 million or 15 percent of the allocated funds.

Funding allocations to-date are: Water Security (41 percent), Energy Security (22 percent), Water-Energy Linkages (29 percent), and program management and communications (8 percent). Total disbursement to the end of 2019 exceeded US$2.0 million or 23 percent of the total allocated funds.

REGIONAL AND COUNTRY CONTEXT



CHAPTER 1

Since inception, the CAWEP vision has been to foster improved water and energy security including through regional cooperation in the management of shared resources. Current efforts build on past successes and the positive indicators and outcomes from recent regional dialogue. During 2019, regional and national geopolitics were positive and dynamic, and the intense World Bank engagement during the year thus proved to be very productive as highlighted in the summaries below.

Regional Context

Water Security. At the *Second Consultative Meeting of the Heads of Central Asian States* (November 2019, Tashkent) a high-level proposal was introduced expressing the need "to deepen engagement with each individual country to re-evaluate perceived needs and opportunities for regional activities that strengthen water-energy security in the region as a whole." The presidents acknowledged the importance of "in-demand dialogue platform to discuss urgent issues of regional cooperation", with energy, water resources, agriculture and environment, among others, identified as key areas for cooperation. Several initiatives have been proposed relating to optimal use of water and energy and their nexus with environmental sustainability. IFAS engages "for the purpose of improving the social, economic, and ecological situation in the basin of the Aral Sea", and in 2019, the chairmanship of the Executive Committee of IFAS passed from Turkmenistan to Tajikistan.

Analytical work undertaken by the World Bank culminated in the preparation of the *Towards Water Secure Sustainable Economies* brochure that highlights three proposed areas for national and regional action. Two of these action areas were further explored with through regional dialogue events in November, that assembled international, regional, and national water stakeholders. The first, *Towards Sustainable and Climate-Resilient Water Supply and Sanitation Services in Central Asia*, was held in Tashkent, Uzbekistan; the second, *Towards Regional Initiatives for Modernizing Irrigation in the 21st Century*, was held in Almaty, Kazakhstan. These events provided direction to future national and regional engagement efforts.

Energy Security. Informed leadership is paramount to progress and success. At the *First Energy Ministers Dialogue of Central Asian Regional Economic Cooperation of Member States* in September in Tashkent, Uzbekistan, the nine CAREC member states signed a ten-point declaration to accelerate cross-border cooperation on energy and to boost establishment of a regional energy market. This was the first time Central and West Asian energy ministers have met to discuss regional energy challenges. The declaration supports regional efforts for development of national and regional energy markets including promoting private sector participation and investment, enhancing regional power interconnections, and stronger commitment to renewable energy and clean technology. Ministers also endorsed a new ten-year Energy Strategy that provides a roadmap for regional energy security. Following the Ministerial Dialogue, officials joined the opening of the two-day fourth CAREC Energy Investment Forum. The forum, designed to unlock and guide private investment, was attended by diverse stakeholders.

Regional tensions have reduced in the wake of reforms in Uzbekistan and government efforts to build friendly relations with neighboring countries. These efforts have led to bilateral agreements on trade, energy, transport, and investment. Uzbekistan has resumed gas supply to Tajikistan and expressed interest in supporting hydropower development in Tajikistan and Kyrgyz Republic. Uzbekistan and Tajikistan have agreed to reconnect their power transmission networks as a first step toward resynchronizing the Tajikistan grid with the Central Asia grid. Recent progress on the CASA-1000 and TUTAP Power Interconnection projects has increased market interest in trade and in third-party electricity supply between Central and South Asia.

These developments are very positive signs given the current resource distribution and infrastructure challenges across the region. Driven by regional economic growth, regional electricity demands will increase by 50 percent by 2030. Meeting this demand will require significant investment, continued planning and market reforms, national and regional capacity development, all of which CAWEP is well placed to support.

Water-Energy Linkages. The Central Asia Climate Change Conference (CACCC-2019) was held in April in Tashkent, Uzbekistan. Over 400 participants discussed climate change priorities for the region and identified the specific tasks and areas of cooperation to promote climate change adaptation. CACCC-2019 was a continuation of the World Bank climate change knowledge and information exchange initiative for Central Asia, organized under the Climate Adaptation and Mitigation Program for Aral Sea Basin (CAMP4ASB).

Country Context

Afghanistan: More than 250 water management projects were executed during 2019 and nine hydropower dams will be constructed over the next three years. The government noted that these projects provide water and energy access to approximately 147,000 families.

Kazakhstan: The country's first president, Nursultan Nazarbayev, resigned in March and Kassym-Jomart Tokayev was elected as the new head of state in June. In June, the new Ministry of Ecology, Geology and Natural Resources was established, and given the responsibility of managing water resources. The new ministry seeks to improve management of water resources and fight poaching and deforestation. To this end, a Water Resources Strategy to 2030 is under preparation, as is a new Environmental Code. Kazakhstan hosted several international events during the year. The *12th Astana Economic Forum* in May in Nur-Sultan included a session on *"Water as a factor of economic growth and security in Central Asia"* moderated by the Swiss Special Envoy for Water in Central Asia. During the event, the World Bank Country Manager for Kazakhstan emphasized that Central Asian economies are not water constrained but are performing far below their water potential. In September, the *Second Asian Expert Forum Dialogue on Water Issues in Central Asia: from the national to the regional level* in Nur-Sultan discussed the role of regional cooperation in addressing water-energy issues. The *First Regional Summit on Mobilizing Finance to Achieve Sustainable Development Goals* in November in Almaty focused on water, energy and climate resilience, and unlocking private capital and leveraging international resources to accelerate achievement of Sustainable Development Goals.

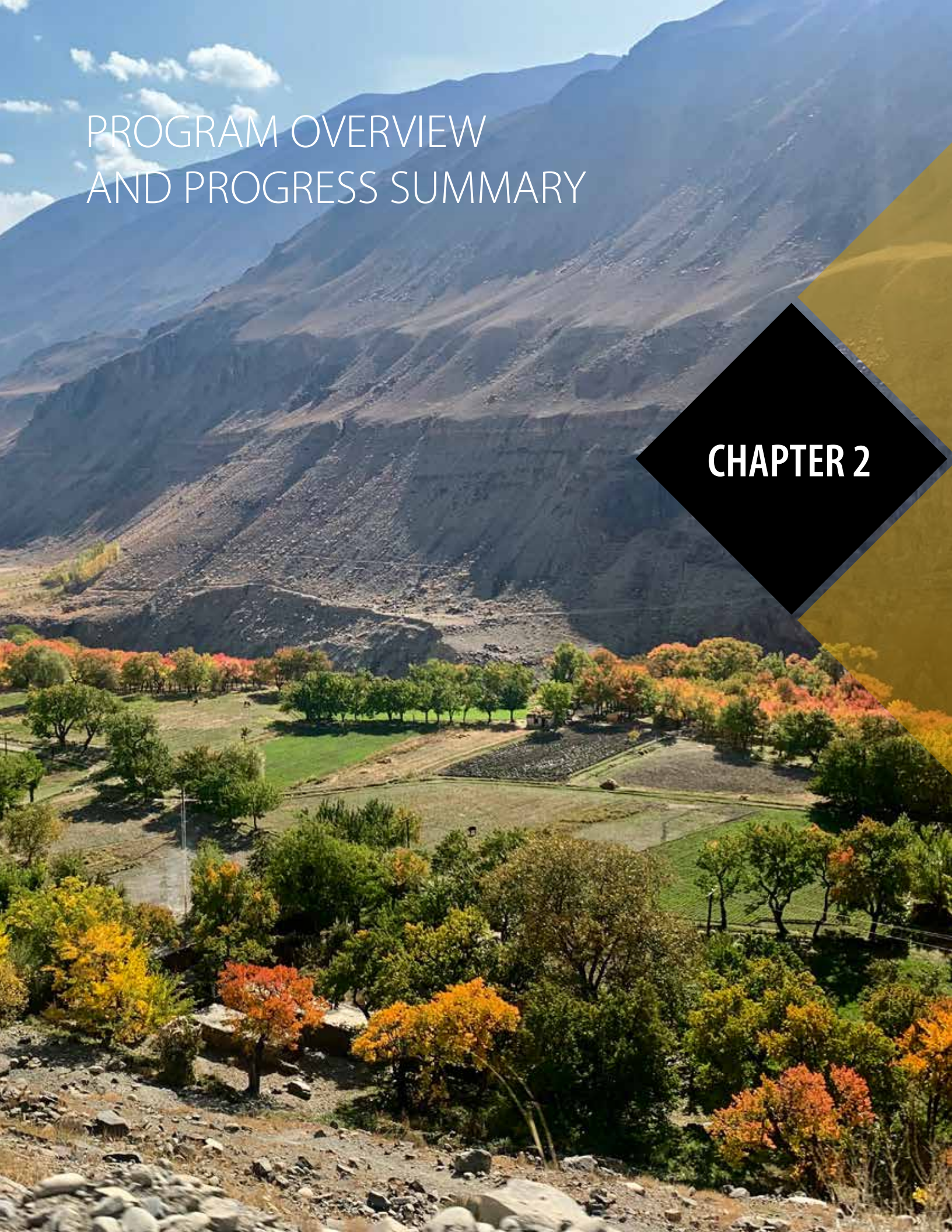
Kyrgyz Republic: In July, the State Water Resource Agency was established to promote IWRM, ensure rational water use and effective inter-state cooperation. The new agency combines the departments of Water Resources and Land Improvement, and Development of Drinking Water Supply and Wastewater Disposal. A forum on *Accelerating Reforms for Sustainable Development* in November, opened by President Sooronbay Jeenbekov, discussed priority areas for development IWRM and climate change. A national strategy for development of a fuel and energy complex by 2030 was drafted.

Tajikistan: In April, the Government adopted a six-year recovery program for Barki Tojik (BT, the national power company) to improve its efficiency and financial sustainability, and commenced the long-awaited capacity expansion and modernization of Nurek hydropower station. The modernization will include refurbishment of three generators, replacement of six autotransformers and enhancement of safety procedures. In September, a second turbine was commissioned at Rogun hydroelectric power station. As a member of the UN High-Level Panel on Water, Tajikistan convened a side event in September at the 74th UN General Assembly in New York on *Transformative Water Actions to Accelerate Global Achievement of Climate Change-Related Goals.* This was an opportunity to showcase achievements in water management and climate change and update participants on the implementation of the International Decade for Action on Water for Sustainable Development (2018–2028).

Turkmenistan: Bilateral discussions initiated by the Turkmen-Afghan Coordination Group on water management issues were held in Ashgabat in April to develop a mutually acceptable mechanism for the integrated and balanced use of transboundary waters. An appropriate mechanism would be based on the accepted norms and principles of international law, considering the interests of all states in the region. In November, Turkmenistan organized and hosted the international conference *Rational Use of Water Resources – Key for Achieving Sustainable Development Goals,* at which the Global Water Partnership launched its 2020–25 Strategy.

Uzbekistan: A Water Strategy to 2030 is under preparation based on medium- and long-term goals and priority areas for development. Presidential resolutions were issued on (i) efficient use of land and water in agriculture; (ii) improvements in water resources management; and (iii) an agriculture development strategy for 2020–2030.

In February, a new Ministry of Energy was established bringing together the oil & gas and power sectors, and in March, a presidential resolution "On strategy for further development and reform of the electric energy sector of the Republic of Uzbekistan" was adopted. In April, electricity and water tariff reforms were initiated, and new tariff regulations adopted. These represent a major step towards full cost-recovery for urban water services and are supported by multi-year investment planning. The Uzbekenergo joint-stock company was reorganized and three new joint-stock companies (Thermal Power Plants, National Electric Grids of Uzbekistan, and Regional Electric Grids) were established. In October, a strategy to transition Uzbekistan to a green economy by 2030 was approved. This will ensure obligations under the Paris Agreement on climate change are met, will prioritize energy efficiency improvements, drive development of renewable energy, and guide climate change adaptation efforts. In November, the Ministry of Housing and Communal Services was entrusted with a water accounting function.



PROGRAM OVERVIEW AND PROGRESS SUMMARY

CHAPTER 2

EU Ambassador to Kazakhstan Sven-Olov Carlsson and World Bank Water Global Practice Director Steven Schonberger sign an agreement on EU contribution of €7 million to CAWEP on May 23, 2019, in Nur-Sultan, Kazakhstan.

Program Objective and Structure

CAWEP is supported by a multi-donor trust fund implemented by the World Bank. The third phase of CAWEP commenced in January 2018 with a US$3.5 million commitment from SECO, followed in August 2018, by a US$1.0 million commitment from DFID channeled through the Program for Asia Connectivity and Trade (PACT). The UK contribution supports electricity trade with South Asia and energy sector activities in Afghanistan, Kyrgyz Republic, Tajikistan and Uzbekistan. In May 2019, the European Union committed €7.0 million, bringing total program funding to US$12.6 million.

The program development objective is to *strengthen the enabling environment to promote water and energy security at regional level and in the beneficiary countries.* CAWEP's long-term vision is to promote sustainable development and livelihood security in Central Asia and Afghanistan.

CAWEP finances initiatives that improve water and energy management, develop and strengthen national and regional institutions, or facilitate regional dialogue on water and energy security. The program helps to realize the benefits of regional cooperation to advance sustainable development and climate resilience.

By the end of December 2022, CAWEP aims to have:

- Improved policy frameworks for water and energy security that are adopted at national level;
- Informed a framework for regional water and/or energy security;
- Strengthened regional and national institutional capacity for water and/or energy management; and
- Leveraged/informed US$2.5 billion (US$0.8 billion for the third phase) of World Bank investments that improve national and regional water and energy security.

CAWEP continues to work with development partners to expand efforts to establish the parameters for cooperation at technical and institutional levels, to strengthen availability of data and information, and to harmonize sectoral policies and regulations to facilitate cross-border connectivity and trade.

CAWEP supports (i) data and diagnostic analyses, (ii) institutions, capacity and dialogue, and (iii) relevant investments; under the following three pillars:

- Water Security – promoting sustainable and efficient use of shared water resources and IWRM
- Energy Security – promoting security and economic efficiency of energy supply from national to regional level
- Water-Energy Linkages – guiding management of the water-energy nexus and climate-change adaptation efforts that link two or more countries.

Annex 1 lists current activities; Annex 2 presents the Results Framework.

Allocation of Program Funds

In 2019, eleven new activities were added to the existing portfolio of 14 activities and program management and communications. Table 1 shows the distribution of activities and funding by pillar and theme, Table 2 shows the distribution across the region, and Figure 3 illustrates the focus areas of the three pillars that contribute overall towards regional water and energy security.

TABLE 1. DISTRIBUTION OF ACTIVITIES AND FUNDING BY PILLAR AND THEME

	Data and Diagnostics		Institutions, Capacity Building & Dialogue		Supporting Investments		Total	
Pillar	**No. of activities**	**US$M allocation**	**No. of activities**	**US$M allocation**	**No. of activities**	**US$M allocation**	**No. of activities**	**US$M allocation**
Water Security	1	0.48	7	2.80	1	0.30	9	3.58
Energy Security	2	0.50	5	0.80	2	0.65	9	1.95
Water-Energy Linkages	4	1.28	3	1.25	0	0.00	7	2.53
Total	**7**	**2.26**	**15**	**4.85**	**3**	**0.95**	**25**	**8.06**

TABLE 2. FUNDING DISTRIBUTION ACROSS THE REGION

Country/Region	US$M
National funding	**4.01**
Afghanistan	0.35
Kazakhstan	0.50
Kyrgyz Republic	0.60
Tajikistan	2.16
Turkmenistan	0.00
Uzbekistan	0.40
Regional funding	**4.05**
Total	**8.06**

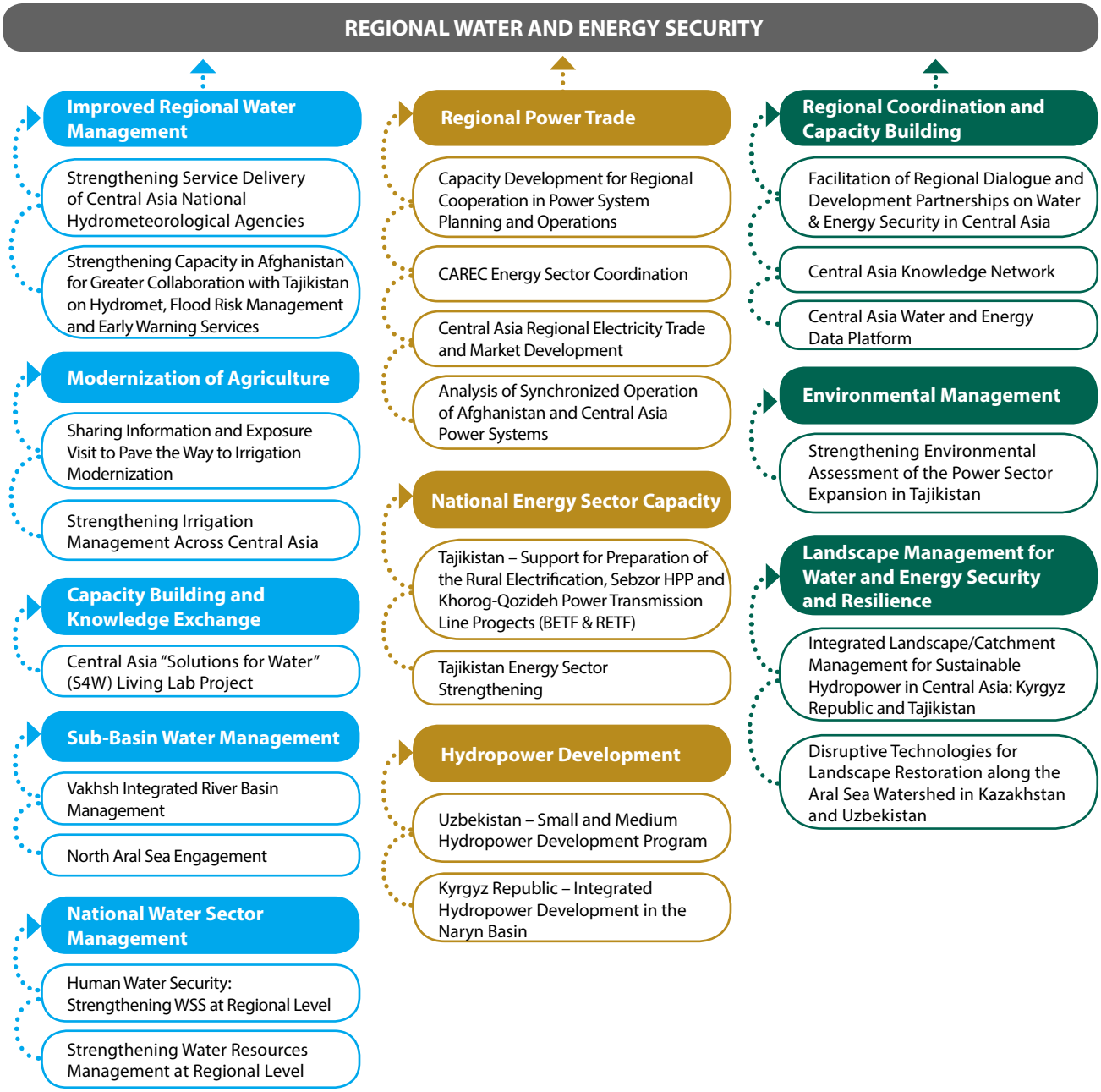


FIGURE 3. CAWEP FOCUS AREAS (WATER – BLUE; ENERGY – BROWN; LINKAGES – GREEN)

PROGRAM EVENTS AND OUTREACH FOR 2019

JAN

Third training on writing research papers, Almaty, Kazakhstan

FEB

First training on writing research papers, Bishkek, Kyrgyz Republic

CAWEP Partnership Event, Nur-Sultan, Kazakhstan

MAR

Participation of the Regional Coordinator of Central Asia Youth for Water Network in the third World Water Day Youth Workshop, Marrakech, Morocco

Program for Financial Recovery of Barqi Tojik

APR

Training of CDC Energia and national dispatch center experts, Tashkent, Uzbekistan

Stocktaking review and mapping of IWRM knowledge and capacity building initiatives by international partners in Central Asia

Review of water-related academic and research capacity in Central Asian countries

CAREC ESCC meeting, Tashkent, Uzbekistan

Second training on writing research papers, Dushanbe, Tajikistan

MAY

Feature story No More Business as Usual: Improving Water Usage in Central Asia

First consultative meeting between Afghanistan and Tajikistan on hydromet, flood risk management and early warning services, Dushanbe, Tajikistan

First Aral Sea Summer School, Almaty & Kyzylorda region, Kazakhstan

JUN

Central Asia Regional Water Supply and Sanitation Conference, Tashkent, Uzbekistan

Second consultative meeting between Afghanistan and Tajikistan, Kabul, Afghanistan

JUL

Study tour of energy experts to Italy

Fourth training on writing research papers, Tashkent, Uzbekistan

AUG

E-learning video modules on the use of the Central Asia Water and Energy Data Platform

Training of CDC Energia and national dispatch center experts, Tashkent, Uzbekistan

CAREC Energy Investment Forum, Tashkent, Uzbekistan

SEP

Financial Model and Expenditure Program for Maintenance of Assets

OCT

Academic event 'Professional Cadre, Innovation and Cooperation - Key to the Success in Water Sector Development in Central Asia', Ashgabat, Turkmenistan

NOV

Regional Workshop on Irrigation Modernization in Central Asia, Almaty, Kazakhstan

DEC

Report with Recommendations on Improvement of Power Purchase Agreements in Tajikistan

Interview with Kazuhiro Yoshida, World Bank Senior Irrigation and Drainage Specialist

Regional Power System Model for Central Asia

Cooperation Roadmap between Afghanistan and Tajikistan on Hydromet, Flood Risk Management and Early Warning Services

Brochure Towards Water Secure Sustainable Economies

Blog Improving water and sanitation in Central Asia requires determination and shared commitment

Summary of Activities

Water Security

Improved Regional Water Management

Strengthening Service Delivery of Central Asia National Hydrometeorological Agencies

TF0B0550; US$300K; Jun '19 – Jun '21

This activity commenced in June 2019 and is assisting national hydrometeorological agencies in the region deliver improved, demand-driven information services. It will improve hydrometeorological monitoring and forecasting, especially weather and hydrologic forecasts to support transboundary cooperation. The activity complements ongoing World Bank operations and partner projects that are strengthening national hydrometeorological services across the region. It has three sub-activities: (i) technical assistance/on-the-job coaching for five national hydrometeorological agencies, (ii) Turkmenhydromet gap analysis and development of a strategic capacity building and service delivery plan, and (iii) opportunity assessment for an Amu Darya basin flood forecasting system.

Strengthening Capacity in Afghanistan for Greater Collaboration with Tajikistan on Hydromet, Flood Risk Management and Early Warning Services

TF0A9176; US$350K; Dec '18 – Jan '21

This activity is building on engagement during 2018 to develop the Hydromet Modernization Roadmap. It supports implementation of roadmap priorities including capacity building, use of regional and global hydromet information, and strengthening coordination between institutions. A consultative meeting in June 2019, in Dushanbe, Tajikistan, led to a review of hydromet information and infrastructure. A second meeting in November 2019, in Kabul, Afghanistan, recommended the 2014 Memorandum of Understanding on data exchange be extended to 2025, and developed a Cooperation Roadmap. The roadmap highlights collaboration on (i) a Panj River early warning system, (ii) joint assessments, (iii) climate change modelling, (iv) glacier studies, (v) use of remote sensing data, and (vi) capacity development. In late 2019 the activity was extended with additional funding to support flood control and early warning, and to advance regional water security through information exchange and modelling.

Modernization of Agriculture

Sharing Information and Exposure Visit to Pave the Way to Irrigation Modernization

TF0A9391; US$300K; Jan '19 – Jun '20

This activity is supporting the irrigation sector in the region. It is supporting early exposure, learning and adoption of sub-system and on-farm modernization concepts in irrigation operations, with a focus on technical and managerial upgrading to improve resource use and service delivery. The *Towards Regional Initiatives for Modernizing Irrigation in the 21st Century* workshop in November hosted by the World Bank in Almaty, Kazakhstan, assembled around 100 participants including delegations from the five Central Asian countries, international experts and development partners. The event encompassed dialogue on irrigation modernization and reform, and peer-to-peer learning and knowledge exchange. Participant feedback rated the quality and utility of the workshop as very high, with an expectation that gained knowledge would be usefully applied. Follow-up events and activities are planned for 2020.

Strengthening Irrigation Management Across Central Asia

TF TBC US$1,300K; Jun '20 – Jun '22

This pipeline activity will build on the above activity to promote institutional strengthening for improved water productivity and better irrigation management across the region. The activity will complement current World Bank irrigation engagements, explore synergies and leverage regional impact. Technical assistance and analyses will focus on: (i) institutional reforms, (ii) dam safety management, (iii) energy efficiency in Tajikistan, (iv) public-private partnerships, and (v) public expenditure reviews.

Afghanistan delegation visits hydromet station on the Varzob River in Tajikistan on June 27, 2019 as part of the bilateral consultative meeting between Afghanistan and Tajikistan on hydromet data exchange, flood risk management and early warning systems.

Capacity Building and Knowledge Exchange

Central Asia "Solutions for Water" (S4W) Living Lab Project

TF0B2730; US$250K; Apr '20 – Jan '22

This pipeline activity was approved in November. It will improve cross-country cooperation and foster linkages between water end-users, academia, students, local authorities and small businesses through creating and supporting a distributed series of "Living Labs". These are project development and implementation teams that assemble stakeholders to tackle local water management problems by developing innovative solutions. Solutions will be piloted and then scaled up or/and disseminated and proposed for implementation in other countries.

Sub-Basin Water Management

Vakhsh Integrated River Basin Management

TF0A7025; US$475K; Apr '18 – Jun '20

This activity has undertaken a needs assessment, prepared an inventory of water infrastructure assets, and prepared a basin action plan with an initial focus on the Lower Vakhsh River Basin. These efforts will inform investment and technical assistance requirements for integrated management of the Vakhsh River Basin. The needs assessment includes (i) sub-basin characterization and mapping of the key infrastructure along the river mainstem; (ii) preparation of the linear schematic for the mainstem infrastructure; (iii) assessment of the irrigation sub-sector (including irrigation, agricultural drainage and flood protection systems), and (iv) assessment of community/municipal/industrial water supply subsector (including water supply, effluent discharge, and water and wastewater treatment systems). The inventory considers infrastructure ownership/management responsibility, date of construction, technical and socio-economic characteristics, quantitative characteristics. GIS-mapping of water infrastructure, irrigated lands, serviced areas and protected lands was carried out. The activity also assessed water institutions and information systems and identified key gaps. In response to a government request, the study was extended (with additional funding) to consider the upper basin. The basin action plan prioritizes investment needs for water sector reforms including establishment of river basin organizations, restructuring regional, district and local institutional arrangements, technical assistance, and capacity building.

Group work of the Kyrgyz delegation at the regional WSS conference on November 14, 2019, in Tashkent, Uzbekistan.

North Aral Sea Engagement

TF0B2375; US$300K; Mar '20 – Dec '20

This approved activity will support preparation of the *North Aral Sea Development and Revitalization Project* that aims to improve water resources management in North Aral Sea-Syr Darya Basin, and the planning and development of natural resources based economic activities in Kyzylorda region of Kazakhstan. The project will help restore wetlands and reduce the impacts of salt and dust blown from the dry seabed. It will undertake a water balance study for the Syr Darya River Basin to inform project preparation, prepare an integrated development plan for Kyzylorda region that optimizes water use, and develop the Environment and Social Framework for the project.

National Water Sector Management

Human Water Security: Strengthening WSS at the Regional Level

TF0B1277; US$200K; Oct '19 – Dec '21

This activity is strengthening water supply and sanitation (WSS) service delivery and resilience at national and regional levels in order to build social stability and human capital. The regional conference *Towards Sustainable and Climate-Resilient Water Supply and Sanitation Services in Central Asia* in November in Tashkent, Uzbekistan brought together more than 100 participants from government departments, utility managers, hydromet specialists, regulatory agencies, and NGOs from across the region together with international experts and development partners. The conference report synthesized regional and international experience on climate adaptation capacity in WSS. The second phase of the activity will focus on strengthening national-level

initiatives to build national institutions in WSS and deepening regional engagement on issues identified by sector stakeholders such as tariff reform and design standards. Follow-up activities in Kyrgyz Republic, Tajikistan and Uzbekistan are planned for 2020.

Strengthening Water Resources Management at a Regional Level

TF TBC; US$100K; duration TBC

This approved activity will strengthen national water sector institutions and enhance broader economic impacts by increasing water productivity, and efficient and integrated water management at country and regional levels. An initial scoping will consider current World Bank engagements to seek synergies and leverage regional impact. Implementation will be guided by this scoping. Possible foci are institutional reforms, capacity building, valuing water, integrated basin modeling, and groundwater management.

Energy Security Pillar

Regional Power Trade

Recent improvements in geopolitical relations in Central Asia and CASA-1000 implementation progress have increased the desire to expand inter- and intra-regional electricity trade, and current activities are thus fostering joint and coordinated approaches to electricity trade and market development.

CAREC Energy Sector Coordination and Cooperation

TF0A7267; US$200K; Mar '18 – Dec '20

CAWEP has engaged with CAREC for several years to enhance regional energy sector dialogue and to coordinate donor assistance in the sector. This includes engagement with the CAREC Energy Sector Coordinating Committee (ESCC), most recently at the 29th ESCC meeting in April in Tashkent, Uzbekistan. Under this activity the World Bank contributed to the CAREC Mid-Term Review and the CAREC Energy Sector Strategy 2030 and participated in the *1st CAREC Energy Ministers' Dialogue* and *4th Central Asia Energy Investment Forum* in September hosted by Uzbekistan in Tashkent. At the Ministers' Dialogue a declaration was signed endorsing the CAREC Energy Sector Strategy 2030 and expressing joint commitment to strengthening and expanding regional power interconnections and exchanges. At the Investment Forum government and private sector representatives shared international experience on private investments and options to increase private investment. The *18th CAREC Ministerial Conference* in November in Tashkent, Uzbekistan, discussed the CAREC Energy Sector Strategy 2030 and its implementation.

Central Asia Regional Electricity Trade and Market Development

TF0A8743; US$300K; Oct '18 – Jul '20

This activity, financed through PACT, is assessing opportunities for regional energy integration and trade (including into South Asia) and developing options for regional market integration. The activity is coordinated with the USAID Central Asia Regional Electricity Market initiative on regional power system modelling and electricity market design. It is reviewing energy demands, exploring electricity trade options, assessing barriers to trade, and will develop a sector action plan. A regional Electricity Planning Model (EPM) has been developed and used to assess the economic benefits of regional electricity trade for the period 2019–2030 for different scenarios. Preliminary results were presented during the *9th South Asia & Myanmar Power Secretaries' Roundtable* in July in Singapore and a Central Asia workshop on electricity market development in October in Tashkent, Uzbekistan, organized by USAID. EPM simulations have been constrained by data availability, although power utilities provided some data that were supplemented with public information. The modelling identified transmission interconnections and hydropower projects that could significantly expand inter- and intra-regional trade. Transmission projects that could be further assessed include Afghan transmission network unification and synchronization with Central Asia grid,

Dispatch center experts from Afghanistan and Central Asian countries together with international experts at a newly established training room in Central Asian dispatch center, CDC Energia on September 18, 2019, in Tashkent, Uzbekistan.

transmission capacity expansion between Tajikistan and Uzbekistan, and expansion of CASA-1000 with South Asia. The modeling is completed and will be reviewed and disseminated in 2020. Work to guide development of energy markets will commence in 2020.

Capacity Development for Regional Cooperation in Power System Planning and Operations

TF0A7333; US$200K; May '18 – Mar '20

This activity is part of regional World Bank energy engagements coordinated with development partners to strengthen regional energy cooperation and connectivity and to develop regional energy markets. This activity will improve the sustainability and the organizational capacity of CDC Energia – a regional power system operator – especially in its planning and operational functions for regional electricity transmission, and through preparation of a long-term capacity development plan for CDC Energia. The activity is also helping national dispatch centers understand the benefits of regional coordination and developing common operational rules/procedures. Based on a 2018 institutional assessment, training programs were designed to improve planning and day-to-day operations of the regional power system. Training workshops, attended by dispatch center experts were held in Tashkent, Uzbekistan, in September 2018, April 2018, and September 2019. A power system operations training facility proposed by CDC Energia was established in 2019 and equipped by USAID.

Analysis of Synchronized Operations of Afghanistan and Central Asia Power Systems

TF0A9869; US$100K; Mar '19 – Dec '20

This activity supports the World Bank-financed *Herat Electrification Project* in Afghanistan through development of a roadmap for the synchronization of the Afghan and Central Asian power systems. It will enhance the capacity of Da Afghanistan Breshna Sherkat (DABS) to manage grid synchronization and inform preparation of the Afghan grid code as well as relevant Afghan policies and investment plans. It will also facilitate dialogue between DABS, CDC Energia and Central Asian national dispatch centers. Data collection for this work is nearly complete, and consultations to discuss the roadmap and the grid code for system synchronization are planned for 2020.

Support for the Preparation of the Rural Electrification, Sebzor HPP and Khorog-Qozideh Power Transmission Line Projects

TF0B1004 recipient grant US$500K; TF0B1244 Bank grant US$150K; Oct '19 – Nov '20

These grants were established in October 2019; the recipient-executed grant became effective in December 2019. Tasks include: (i) feasibility studies, (ii) mandatory environmental and social impact assessments, (iii) disaster risk screening and mitigation assessments, (iv) preparation of procurement documents, (v) knowledge sharing on electricity grid operations and maintenance, and (vi) capacity building on planning and operations, transmission and distribution, and energy security and efficiency. The work is informing preparation and implementation of (i) the US$45 million (KfW and EU) Sebzor HPP project in Tajikistan and the US$9.5 million (SECO) transmission line to connect Sebzor to the grid, (ii) the US$31.7 million (World Bank) Tajikistan Rural Electrification Project plus US$10 million additional financing (World Bank) for Khorog-Qozideh transmission line, (iii) US$3 million (USAID) in technical assistance.

National Energy Sector Capacity

Tajikistan: Energy Sector Strengthening

TF0A9034; US$100K; Nov '18 – Jul '21

This activity has informed the design of measures to improve financial and operational performance of BT and to unblock regional power trade by strengthening the company's financial standing and institutional capacity. Financial recovery of BT is one of key pre-conditions for expanded regional power trade, and increased energy trade is a key pillar of the Tajikistan National Development Strategy 2016–2030. The activity helped Tajikistan reconnect to the region power system by developing regulatory frameworks for energy pricing and power purchase agreements. It also helped design the "Program of Financial Recovery of BT for 2019–2025", approved by the Government in April 2019. The activity also informed the design of the US$134 million World Bank financed Power Utility Financial Recovery Program. Key work for BT has included: (i) financial analyses; (ii) recommendations for improved operational efficiency; (iii) financial model development; (iv) corporate governance review and recommendations; (v) drafting of regulatory documents for reform implementation; (vi) social impact analyses; and (vii) legal and regulatory analyses to remove bottlenecks to regional power trade expansion. An extension of this activity is being considered to (i) evaluate the impacts on hydroelectricity generation of reservoir sedimentation, and (ii) update financial and operational recommendations in the light of COVID-19 impacts.

Hydropower Development

Uzbekistan – Small and Medium Hydropower Development Program

TF0A7213; US$200K; May '18 – May '20

This activity commenced in May 2018. It supports Uzbekhydroenergo and the Hydro Project Institute in building institutional capacity and developing small and medium hydropower programs. It is (i) preparing an action plan for Uzbekhydroenergo (capacity development, regulatory and financing frameworks), (ii) developing a method for feasibility study design, (iii) designing project concepts and financial models for small and medium hydropower pilots, and (iv) convening a range of knowledge sharing workshops and study tours. In 2019, an international study tour to Italy and a workshop were conducted. Capacity building work, action plan preparation, and the feasibility study design method were completed. An extension of the activity is being considered to enable completion of two hydropower pre-feasibility studies.

Kyrgyz Republic – Integrated Hydropower Development in the Naryn River Basin

TF0A8728; US$200K; Oct '18 – May '20

This activity is assessing the viability and required enabling framework for hydropower development in the Naryn River Basin in the Kyrgyz Republic in line with national social and economic development goals. Additional hydropower generation will help close the domestic winter electricity supply gap and increase export revenue. The activity is assessing hydropower development using a river basin approach and will develop a hydropower development roadmap for the basin. Initial consultations and site visits (in coordination with development partners), data collection, and analysis has been undertaken and results shared with the Kyrgyz Government and other stakeholders. The *Hydropower Development Potential in Naryn River Basin Review* will be finalized in 2020 and will offer recommendations for strengthening institutional arrangements (including legal and regulatory frameworks) for private sector participation in hydropower development. Roadmap development will depend on stronger client engagement including acceptance of institutional recommendations and increased data access.

Uzbekistan energy experts on study tour to Italy, September 30 – October 4, 2019

Water-Energy Linkages Pillar

Regional Coordination and Capacity Building

Facilitation of Regional Dialogue and Development Partnerships on Water & Energy Security in Central Asia

TF0A7071; US$450K; Mar '18 – May '22

Since inception, CAWEP has engaged through this activity with governments and key development partners (DFID, EU, GIZ, SDC, SECO, USAID) to improve water and energy security across the region. The activity has two components: regional dialogue among countries to develop a regional engagement strategy, and coordination between development partners to develop a shared long-term vision. A meeting of development partners in September highlighted shared program implementation challenges (e.g., lack of political commitment, lack of strategic direction in WRM, and variable capacity) and agreed that shared messaging be developed to support coordinated actions at multiple levels. This shared messaging is captured in a brochure *Towards Water Secure Sustainable Economies* completed in December, that highlights the risks of business as usual and the opportunities from alternative water development pathways. It highlights three action areas: (i) invest in water supply and sanitation for social stability and human capital development; (ii) overhaul water resources and irrigation management for increased productivity; and (iii) invest in adaptation measures to build economic and social resilience to climate change. A regional consultation tour is planned for 2020 to better understand national and regional water security priorities and to identify opportunities for bilateral or regional coordination and cooperation.

Central Asia Water and Energy Data Platform

TF0A8939; US$50K; Mar '18 – Sep '19

This activity developed an online portal to improve access to publicly available information and supported outreach and dissemination activities. *The Central Asia Water and Energy Data Portal* (in Russian and English), hosted on a World Bank server, includes 42 interactive maps on environment, social, economic, climate, water, and disaster topics. Some spatial datasets are available for download for use in visualization and further analysis using commercial or open source GIS software. The portal synthesizes interactive data from the *Central Asia Hydrometeorology Modernization Project* and the *Climate Adaptation and Mitigation Program for the Aral Sea Basin* and provides links to relevant databases. The portal will benefit resource managers, policy makers, students, and researchers across the region and beyond. During 2019, the activity also created *e-learning video modules* on "How to Use" the Central Asia Water and Energy Data Portal. These short videos have been integrated into the curriculum of the "Integrated Water Resource Management" Masters' program of the Kazakh-German University, Almaty, Kazakhstan. The "Young Leaders - Vector of Change" 2019 Summer School, organized by the Kazakh-German University, included training and presentations on data portal.

Students of Kazakh-German University are learning how to use Central Asia Water and Energy Data Portal, August 11, 2019, Almaty, Kazakhstan.

Peer-to-peer training to build capacity in writing scientific and research papers on water and energy-related topics, April 15, 2019, Dushanbe, Tajikistan.

Central Asia Knowledge Network

TF0A7242; US$400K; Mar '18 – Dec '20

This activity continues efforts that commenced under CAWEP in 2012, to foster cooperation and knowledge exchange among local and regional institutions and practitioners in the areas of water resource management, energy and climate change. Since 2012, the Knowledge Network has matured and there are now four operational communities of practice: the Central Asia Youth Forum on Water, the Academic Network in Central Asia, the Regional Cross-Sectoral Working Group in Kazakhstan, and the National Cross-Sectoral Working Group in the Kyrgyz Republic. The activity works at three levels: (i) strengthening national sectoral and cross-sectoral capabilities, (ii) enabling deeper regional cooperation, and (iii) developing academic and research capacity, connecting youth with practitioners, and promoting gender-related efforts in IWRM. In 2019, around 100 people (half men, half women) participated in dialogue events. A stocktaking review and mapping of water knowledge and capacity building initiatives by international partners was completed in April, together with an assessment of water-related academic and research capacity in the region. A study tour for Tajik water practitioners to the Tashkent Institute of Engineers of Irrigation was conducted, and the First Aral Sea Summer School was convened. Regional events included a *Water and Science for Sustainable Future* conference in April on the margins of the Central Asia Climate Change Conference, in Tashkent, Uzbekistan, and a *Professional Cadre, Innovation and Cooperation* event in November in Ashgabat, Turkmenistan. Trainings for water academics and practitioners on preparing scientific papers were delivered in Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan. The activity continues to support the online Central Asia Journal for Water Research.

Landscape Management for Water and Energy Security and Resilience

Tajikistan – Integrated Landscape/Catchment Management for Sustainable Hydropower in Central Asia

TF0B0866; US$480K; Aug '19 – Mar '21

This activity commenced in August 2019 to undertake a cost/benefit analysis of integrated landscape restoration and catchment area management that reduce sediment inflow to Nurek and Baipaza reservoirs on the Vakhsh River in Tajikistan. Rapid sedimentation of reservoirs can threaten the longevity of hydropower plants. This is of particular concern in Central Asia given steep mountainous terrain in the headwater catchments and the widespread land degradation. Central Asian countries lack the capacity and data to conduct robust pre-feasibility studies for hydropower projects that consider integrated catchment management and restoration, and evaluation of catchment ecosystem services. The activity will include: (i) baseline data collection, (ii) economic evaluation, and (iii) capacity building.

Kyrgyz Republic – Integrated Landscape/Catchment Management for Sustainable Hydropower in Central Asia

TF0B2684; US$400K; Apr '20 – Mar '22

This activity will commence in 2020 and undertake a cost/benefit analysis of integrated landscape restoration and catchment management to reduce sediment inflow to Toktogul Reservoir in the Kyrgyz Republic. It will adopt a similar approach, and learn from the related work in Tajikistan for Nurek and Baipaza reservoirs. This activity will complement the National Water Resources Management Project financed by Switzerland and will provide government with detailed knowledge on erosion and sedimentation processes, and on the links between catchment and reservoir condition.

Tajikistan – Strategic Environmental Assessment of the Power Sector Expansion

TF TBC; US$350K; duration TBC

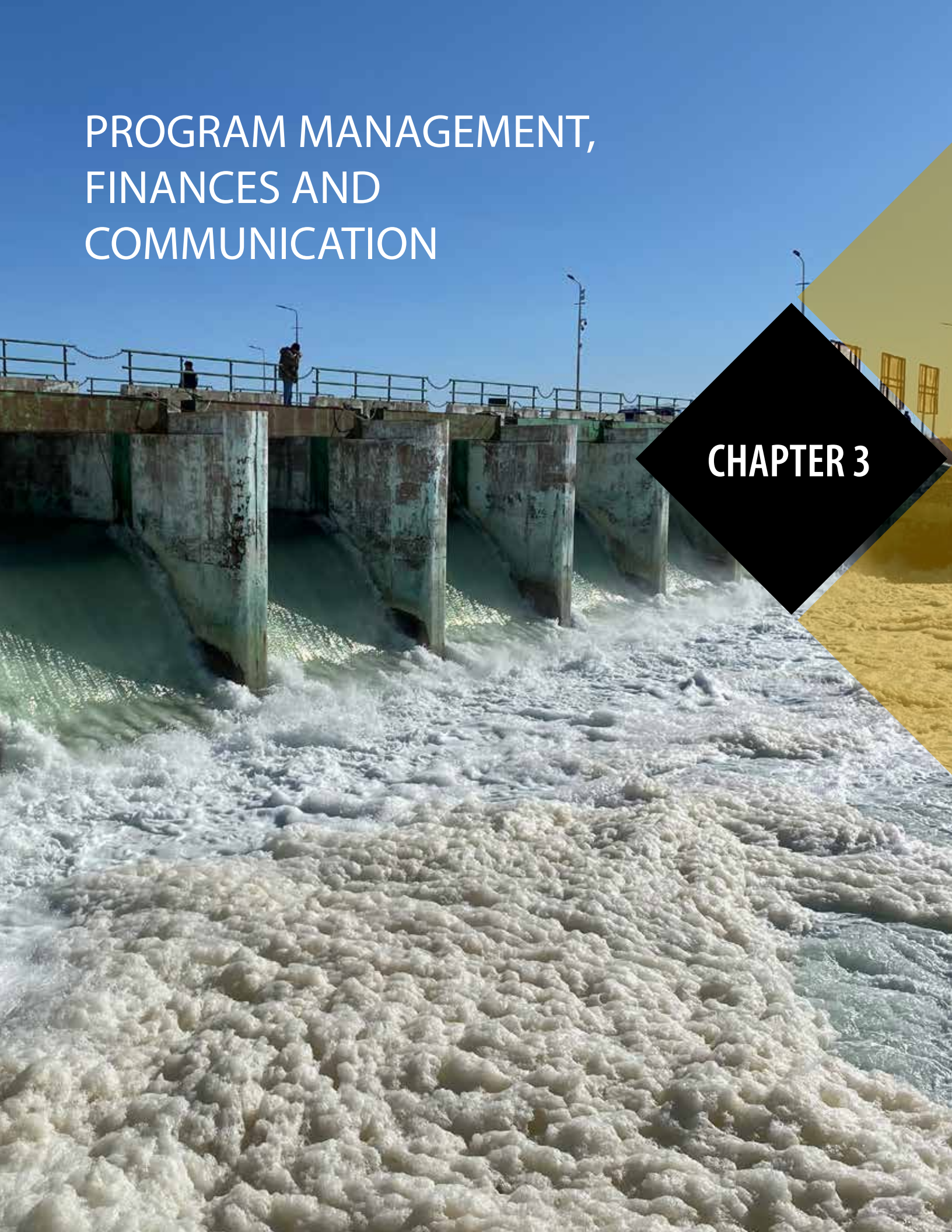
This activity will help the Government of Tajikistan incorporate environmental and social criteria in power sector expansion plans to promote sustainable development and rational use of scarce water resources. It will support major hydropower projects that have significant environmental and social risks, as well as new thermal power projects that require significant cooling water, especially those that could potentially impact neighboring countries. This activity will ensure that selection of new power projects to reduce winter energy shortages considers long-term environmental and social sustainability. Key activities will include: (i) assessing environmental and social impacts of base-case electricity generation expansion plan; (ii) determining environmental and social criteria for electricity generation projects selection; (iii) providing guidance on energy project development and appraisal to national and regional authorities that aligns with the requirements of international financial institutions and private sector lenders; (iv) engaging stakeholders; (v) developing an environmental and social GIS database for Tajikistan; (vi) providing potential investors with information on appropriate locations and types of energy facilities and on key issues of concern; (vii) providing authorities with guidance and tools to help with appraisal of projects proposed by developers, and assessment of potential environmental and social consequences.

Kazakhstan, Uzbekistan – Disruptive Technologies for Landscape Restoration Along the Aral Sea Watershed

TF0B2683; US$400K; Apr '20 – Feb '22

This activity will commence in 2020 and develop innovative approaches for landscape restoration in targeted degraded landscapes in Kazakhstan and Uzbekistan. One example is expected to be saxaul tree plantations that can reduce transport of dust and associated pollutants from the Aral Seabed that cause respiratory health problems. The activity will have two components: an innovation challenge and preparation of an e-book of innovative approaches. The innovation challenge will seek proposals for grants to support environmental innovations. The e-book will describe disruptive landscape restoration technologies for Central Asian drylands with an emphasis on sustainable land and water management.

PROGRAM MANAGEMENT, FINANCES AND COMMUNICATION



CHAPTER 3

Program Management

CAWEP is managed by a program manager, pillar leaders, field-based liaison officer, and senior program assistant (Figure 4). The program manager oversees program implementation, reporting, dissemination and outreach; leads coordination with donor partners and ensures program stakeholders are kept informed. Pillar leaders provide advice on strategic direction, monitor pillar implementation, and liaise with task team leaders to ensure timely and qualitative delivery of activities. The field-based liaison officer supports program coordination, trust fund management, donor coordination, and monitoring and evaluation. The program management account (TF0A6615) covers program management and administration costs, which amounted to US$213,272 during 2019 (16 percent of total 2019 disbursements) including salaries, travel, monitoring and evaluation, and minor meeting expenses.

Day-to-day management of CAWEP by the program manager and pillar leaders is overseen by the CAWEP management team of water and energy practice managers, together with country and regional-level managers in the World Bank. At a higher strategic level, the program is guided by the Advisory Committee of donor partners and World Bank management. The Advisory Committee met in March and November 2019 to approve updates to the rolling annual work plan. At the March meeting, the Advisory Committee agreed to change the program name to the Central Asia Water and Energy Program for communication purposes, endorsed four new activities and recommended that the work plan indicate the contributions of each activity to the program Results Framework.

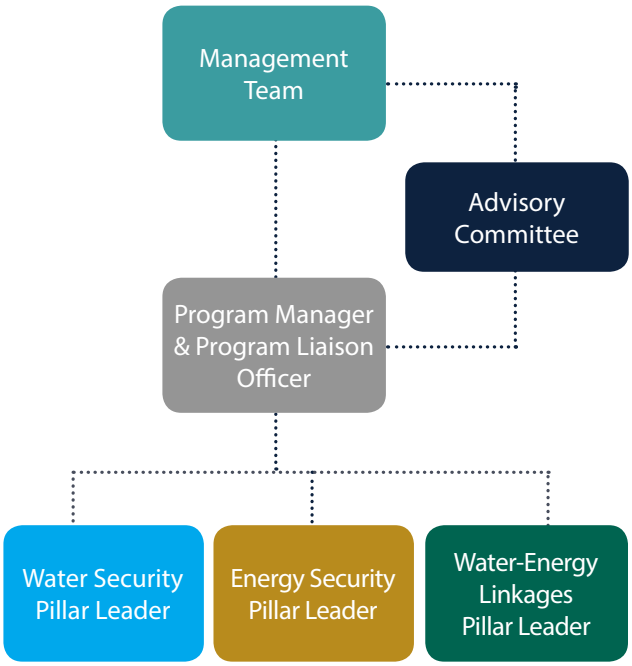


FIGURE 4. CAWEP GOVERNANCE AND MANAGEMENT

The Advisory Committee also requested a strengthening of the program's field presence to leverage regional cooperation impacts. At the November meeting the Advisory Committee approved an out-of-session process for considering and approving new activities and approved a revised work plan with five new activities.

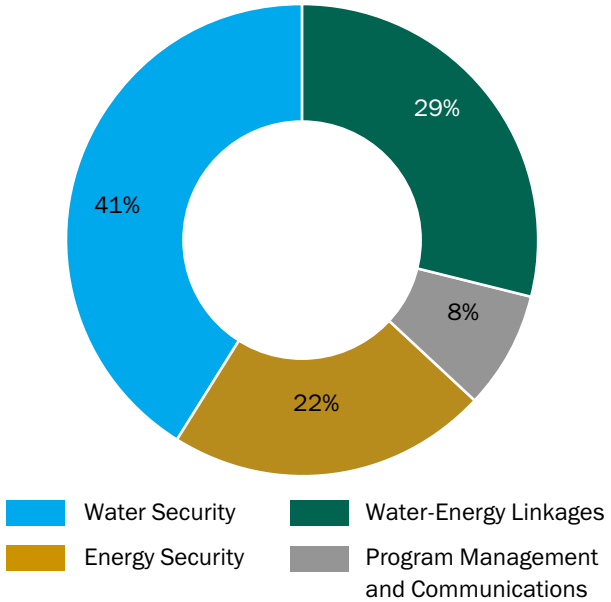


FIGURE 5. 2019 FUNDS ALLOCATION BY PILLAR

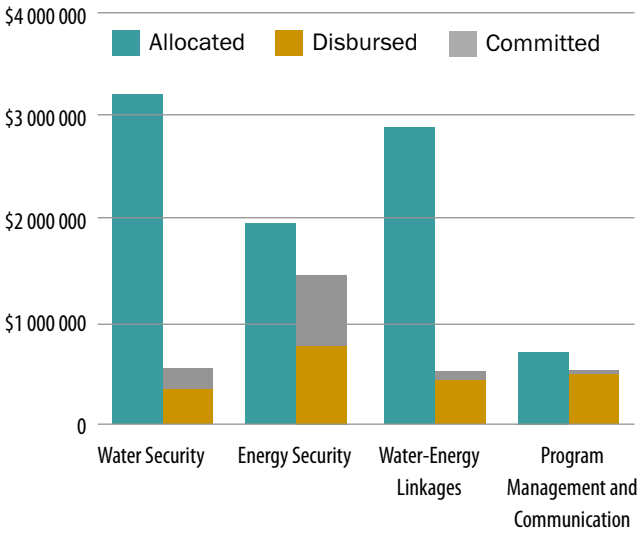


FIGURE 6. TOTAL DISBURSEMENT BY PILLARS

Financial Overview

In 2018 – the first year of implementation for the third phase of CAWEP – US$2.28 million was allocated to 16 activities across six beneficiary countries; disbursements were US$0.7 million or 32 percent of allocated funds. In 2019, donor commitments to the program reached US$12.6 million – exceeding the expected funding ceiling of US$10 million. An EU contribution of US$2.26 million in 2019 increased paid-in contributions to US$7.0 million.

By the close of 2019, 27 activities and US$8.76 million (70 percent of the total program budget) had been approved, including for program management and communications. While most funds are allocated to Bank-executed activities, 6 percent of the funds have been allocated to one recipient-executed activity in Tajikistan.

Funding allocations vary by pillar (Figure 5). Relative support to Water Security and Water-Energy Linkages increased in 2019 with new institutional and capacity building activities for irrigation and water management and new environmental studies. Disbursements and commitments to-date by pillar (Figure 6) reflect earlier implementation of energy-related activities and new activities approved late in 2019 dominating the other two pillars.

Disbursements in 2019 were twice the 2018 total, growing steadily through from US$0.7 million to reach a total US$2 million (23 percent of allocated funds; Figure 7).

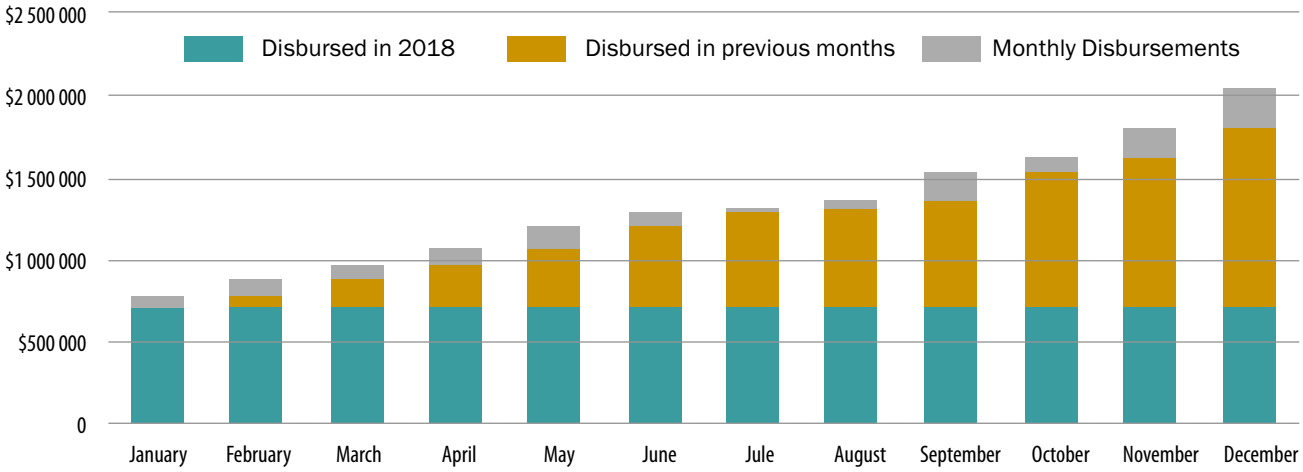


FIGURE 7. 2019 DISBURSEMENTS

Communication and Outreach

The CAWEP Outreach and Dissemination *(TF0A6802)* activity strengthens knowledge-sharing and increases stakeholder understanding of CAWEP efforts through a strategic communications framework. It is guided by a CAWEP Communication Strategy adopted in 2018 and a Communication and Visibility Plan endorsed by the Advisory Committee in March 2019. The Communication and Visibility Plan reflects the communication and visibility requirements of EU-funded programs. The supporting grant was increased from US$100,000 to US$300,000 with Advisory Committee approval in March; disbursements reached 53 percent of the total grant amount by the close of the year.

A new program logo – to reflect the updated program name – was designed and adopted on all communications materials. Communications support was provided to the two regional water sector workshops in November 2019, that were covered by 26 media outlets. The program webpage (in *English* and *Russian*) is updated regularly with new outputs and announcements and was visited more than 1,700 times (Figure 8). In 2019, the following communications products were produced and disseminated: (i) *CAWEP 2018 Annual Report,* (ii) four Quarterly Newsletters, (iii) 24 Media Digests, (iv) *Aral Sea Youth Summer School video,* (v) eleven videos on the regional water workshops, (vi) 36 social media posts, and (vii) three press releases. Other outreach included a blog on water supply and sanitation by Lilia Burunciuc, World Bank Regional Director for Central Asia, a story on improving water use, as well as an interview on irrigation modernization with Kazuhiro Yoshida, World Bank Senior Irrigation and Drainage Specialist. Communication outputs such as blogs and stories and videos in social media have a higher engagement with Russian-speaking audience. Videos in the World Bank Country Office Facebook pages reached over 5,000 views. A partnership event in

May, 2019, marking the joining of the European Union as a CAWEP donor, was attended by the Ambassador of the EU Delegation to Kazakhstan, the Ambassador of Switzerland to Kazakhstan and Tajikistan, the World Bank Regional Director for Central Asia, the World Bank Water Global Practice Director, and was covered by 46 media outlets.

Table 3 lists the key CAWEP outputs and communications for 2019.

Looking Ahead

In 2020, outcomes of early program activities are expected to emerge, including on small and medium hydropower development program in Uzbekistan, and from the Vakhsh River Basin needs assessment in Tajikistan. Communications will increase CAWEP visibility and raise awareness of program outcomes. New recipient-executed activities in support of major water investments will commence and provide a vehicle for regional engagement. CAWEP connections to World Bank and development partners' investments will be actively promoted to ensure sustainability and value. Regional engagement with country governments and development partners will be strengthened and new directions for regional dialogue explored. The change in chairmanship for EC-IFAS will bring opportunities for much-needed institutional reforms but will require full engagement from all participating countries. Accelerated program implementation will be prioritized but recognizing the challenges that accompany the COVID-19 pandemic.

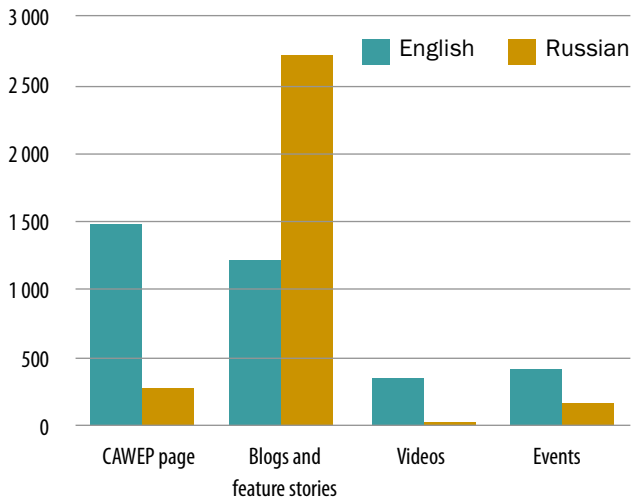


FIGURE 8. NUMBER OF VIEWS

TABLE 3. 2019 PROGRAM OUTPUTS AND COMMUNICATION

Program Outputs	Communication Outputs
Central Asia Regional Water Supply and Sanitation Conference: report, presentations *Regional Workshop on Irrigation Modernization in Central Asia:* report, presentations Cooperation Roadmap on Hydromet, Flood Risk Management and Early Warning Services Brochure *Towards Water Secure Sustainable Economies: English* and *Russian* Program of Financial Recovery of Barki Tojik Financial model and expenditure program for maintenance of assets Report with recommendations on improvement of power purchase agreements in Tajikistan Regional Power System Model for Central Asia *Central Asia Water and Energy Data Portal* *Stocktaking review and mapping of IWRM knowledge and capacity building initiatives by international partners in Central Asia* *Review of water-related academic and research capacity in Central Asian countries* *Russian version of Central Asian Journal of Water Research*	**Videos** *First Aral Sea Summer School video* WSS conference video: *English* and *Russian* *10 video interviews with conference participants* *E-learning video modules on the use of the Central Asia Water and Energy Data Portal* **Press releases** *New European Union Seven Million Euro Grant to Strengthen Water and Energy Security in Central Asia* *Central Asian Water Supply and Sanitation Experts Share Experiences at Conference in Tashkent* *Central Asian Experts Discuss Irrigation Modernization to Enhance Water Productivity* **Blogs, feature stories and interviews** *Blog Improving water and sanitation in Central Asia requires determination and shared commitment by Lilia Burunciuc, World Bank Regional Director for Central Asia* *Feature story No More Business as Usual: Improving Water Usage in Central Asia by Ato Brown, World Bank Country Manager for Kazakhstan* *Interview with Kazuhiro Yoshida, World Bank Senior Irrigation and Drainage Specialist*

ANNEXES

ANNEX 1. FOCUS AREA, THEMES, AND ACTIVITIES BY PILLAR

WATER SECURITY

Focus Area	Theme	Activity	Countries	TF No.
Sub-Basin Water Management	Data and Diagnostic Analyses	Vakhsh Integrated River Basin Management	Tajikistan	TF0A7025
Modernization of Agriculture	Institutions, Capacity, and Dialogue	Sharing Information and Exposure to Pave the Way to Irrigation Modernization	Central Asia	TF0A9391
Improved Regional Water Management	Institutions, Capacity, and Dialogue	Strengthening Capacity in Afghanistan for Greater Collaboration with Tajikistan on Hydromet, Flood Risk Management and Early Warning Services	Afghanistan Tajikistan	TF0A9176
Improved Regional Water Management	Institutions, Capacity, and Dialogue	Strengthening Service Delivery of Central Asia National Hydrometeorological Agencies	All countries	TF0B0550
National Water Sector Management	Institutions, Capacity, and Dialogue	Human Water Security: Strengthening WSS at Regional Level	Central Asia	TF0B1277
Sub-Basin Water Management	Supporting Investments	North Aral Sea Engagement	Kazakhstan	TF0B2375
National Water Sector Management	Institutions, Capacity, and Dialogue	Strengthening Water Resources Management at Regional Level	All countries	TBC
Modernization of Agriculture	Institutions, Capacity, and Dialogue	Strengthening Irrigation Management Across Central Asia	Central Asia	TBC
Capacity Building and Knowledge Exchange	Institutions, Capacity, and Dialogue	Central Asia “Solutions for Water” (S4W) Living Lab Project	All countries	TF0B2730

ENERGY SECURITY

Focus Area	Theme	Activity	Countries	TF No.
Hydropower Development	Data and Diagnostic Analyses	Uzbekistan Small and Medium Hydropower Development Program	Uzbekistan	TF0A7213
Regional Power Trade	Institutions, Capacity, and Dialogue	CAREC Energy Sector Coordination and Cooperation	All countries	TF0A7267
Regional Power Trade	Institutions, Capacity, and Dialogue	Capacity Development for Regional Cooperation in Power System Planning and Operations	All countries	TF0A7333
Hydropower Development	Institutions, Capacity, and Dialogue	Integrated Hydropower Development in the Naryn River Basin	Kyrgyz Republic	TF0A8728
National Energy Sector Capacity	Institutions, Capacity, and Dialogue	Energy Sector Strengthening	Tajikistan	TF0A9034
Regional Power Trade	Institutions, Capacity, and Dialogue	Analysis of Synchronized Operation of Afghanistan and Central Asian Power Systems	Afghanistan	TF0A9869
National Energy Sector Capacity	Supporting investments	Support for Preparation of the Rural Electrification, Sebzor HPP and Khorog-Qozideh Power Transmission Line Projects (Recipient-executed grant)	Tajikistan	TF0B1004
National Energy Sector Capacity	Supporting investments	Support for Preparation of the Rural Electrification, Sebzor HPP and Khorog-Qozideh Power Transmission Line Projects (Bank-executed grant)	Tajikistan	TF0B1244
Regional Power Trade	Data and Diagnostic Analyses	Central Asia Regional Electricity Trade and Market Development	All countries	TF0A8743

WATER-ENERGY LINKAGES

Focus Area	Theme	Name	Countries	TF No.
Regional Coordination and Capacity Building	Institutions, Capacity, and Dialogue	Facilitation of Regional Dialogue and Development Partnerships on Water & Energy Security in Central Asia	All countries	TF0A7071
Regional Coordination and Capacity Building	Institutions, Capacity, and Dialogue	Central Asia Knowledge Network	All countries	TF0A7242
Regional Coordination and Capacity Building	Data and Diagnostic Analyses	Central Asia Water and Energy Data Platform	All countries	TF0A8939
Landscape Management for Water and Energy Security and Resilience	Data and Diagnostic Analyses	CLIENT -RESILAND-CAEWDP (Tajikistan Integrated Landscape/Catchment Management)	Tajikistan	TF0B0866
Landscape Management for Water and Energy Security and Resilience	Data and Diagnostic Analyses	Integrated Landscape/Catchment Management for Sustainable Hydropower in Central Asia (Kyrgyz Republic)	Kyrgyz Republic	TF0B2684
Landscape Management for Water and Energy Security and Resilience	Institutions, Capacity, and Dialogue	Disruptive Technologies for Landscape Restoration along the Aral Sea Watershed in Kazakhstan and Uzbekistan	Kazakhstan, Uzbekistan	TF0B2683
Environmental Management	Data and Diagnostic Analyses	Strategic Environmental Assessment of the Power Sector Expansion in Tajikistan	Tajikistan	TBC

ANNEX 2. RESULTS FRAMEWORK

PROGRAM-LEVEL OUTCOMES

Component: Strengthen the enabling environment to promote water and energy security at regional level and in beneficiary countries.

Baseline: Disparate national-level investments and fragmented regional cooperation. Weak regional institutions are not fulfilling mandates to promote regional cooperation. HEP investment plans negatively impact on already tense neighborly relationships. **February 2017 status:** Two regional projects (CAHMP and CAMP4ASB) informed, approved and regional components implemented through regional organizations closely linked to national components. CAREC^{env} strengthened as regional entity facilitating regional dialogue. Energy trade talks shifting towards strengthening of intra-regional connectivity.

Indicator[1]	Cumulative Values by Year							Expected Outputs[2]
	Planned Actual	'18	'19	'20	'21	'22[3]	TARGET[4]	
Number of policies, sector strategies, regional institutional frameworks being developed that are based on recommendations of CAWEP funded analytical work.	Planned	0	2	4	8	9	7	**2019:** Regional vision on water development; Program for Financial Recovery of Barqi Tojik **2020:** Roadmap for development of regional electricity markets in Central Asia; Roadmap for synchronization of Afghan Power System with the Central Asia Power System **2021:** Roadmap for integrated hydropower development in the Naryn River Basin; Landscape restoration and watershed management plan in Tajikistan; Framework proposal on development of a basin-wide Amu Darya flow and flood forecasting system; A strategy on how to best involve and advance Afghanistan in Central Asian water management issues **2022:** Landscape restoration and watershed management plan in the Kyrgyz Republic; Engagement strategy
	Actual	0	2					*Water security brochure*; Program for Financial Recovery of Barqi Tojik.
Number of institutions demonstrating improved management performance.	Planned	0	4	6	15	19	7	**2019:** Tajikistan BT; CDC Energia; Uzbekhydroenergo JSC; Hydroproject design institute. **2020:** DABS of Afghanistan; Kazakh-German University. **2021:** National Energy Holding Company in the Kyrgyz Republic; State Committee for Industry, Energy and Subsoil Use of the Kyrgyz Republic; National Hydrometeorological Agencies of five Central Asian countries; Department of Drinking Water Supply and Wastewater Disposal; Ministry of Housing and Communal Services of Uzbekistan (or State Unitary Enterprise Khojagii Manziliyu-Kommunali of Tajikistan). **2022:** Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Tajikistan Institute of Water, Hydro Energy and Ecology, Kyrgyz Institute of Water Problems and Hydropower Energy, CAREC^{env}

Indicator[1]	Cumulative Values by Year							Expected Outputs[2]
	Planned Actual	'18	'19	'20	'21	'22[3]	TARGET[4]	
	Regional	0	1	2	2	2	3	CDC Energia; CAREC[env]
	Actual	0	4					Tajikistan BT; CDC Energia; Uzbekhydroenergo JSC; Hydroproject Design Institute.
	Regional	0	1					CDC Energia
Number of joint decisions (or agreements) to move forward reached.	Planned	0	0	1	2	2	4	Agreement to extend the 2014 Memorandum of Understanding between Afghanistan and Tajikistan; Joint inclusion in Nationally Determined Contributions of issues related to land and water.
	Actual	0	1					Agreement to extend the 2014 Memorandum of Understanding between Afghanistan and Tajikistan.
Amount of investment (US$B) that reflects transboundary consideration that are based on/include recommendations from CAWEP funded activities.	Planned			0.16	0.32	0.92	0.8	Potential Naryn cascade (US$0.5 B); Tajikistan Power Utility Financial Recovery Program (US$0.13 B); Tajikistan Rural Electrification Project (US$0.03 B); potential transmission interconnection upgrade project or potential new cross-border transmission project (tbd US$0.1 B); North Aral Sea Development and Revitalization Project (US$0.16 B).
	Actual	0	0.13					*Tajikistan Power Utility Financial Recovery Program* (US$0.134 B, approved on February 25, 2020).

1 Tracked annually – quantitative; target values are for CAWEP Phase 3.
2 Planned under current activities.
3 Targets as per planned activities.
4 Targets (minimum) from approved Concept Note (July 2017).

PILLAR-LEVEL OUTCOMES: WATER SECURITY

Component: Data and Diagnostic Analyses.

Baseline: Opportunities and constraints to improve water productivity and use efficiency are not systematically analyzed, and not identified at the regional level and not owned by riparian governments. National action plans to improve agricultural water productivity do not exist. **February 2017 status:** New WSS strategy in Uzbekistan informed; multiple studies developed as basis for carrying forward the policy dialogue: Promoting Irrigation Efficiency, Social Impact Assessment on WSS, Analysis of WSS Services, Strengthening Irrigation Governance, Assessment of Agricultural Water Use Efficiency in Tajikistan.

Indicator	Cumulative Values by Year							Expected Outputs
	Planned Actual	'18	'19	'20	'21	'22	TARGET	
Number of analytical outputs related to water use efficiency, water balance or topics related to integrated water resources management.	Planned	0	2	3	3	3	5	Needs assessment report for integrated basin management; Inventory of assets with GIS-mapping; Report on status of cooperation between Afghanistan and Tajikistan on hydromet data exchange, flood control and early warning.
	Actual	0	3					Needs assessment for integrated basin management for the Lower part of the Vakhsh Basin; Basin maps and schematic for the lower part of the Vakhsh Basin; Report on status of cooperation between Afghanistan and Tajikistan on hydromet data exchange, flood control and early warning.

Component: Institutions, Capacity and Dialogue.

Baseline: Institutional capacity varies between countries. Limited institutional linkages between riparian states on agricultural water management. Active donors in the region and in countries have disparate coordination. **February 2017 status:** Water User Associations in Uzbekistan strengthened.

Indicator	Cumulative Values by Year							Expected Outputs
	Planned Actual	'18	'19	'20	'21	'22	TARGET	
Number of learning activities that strengthen capacity of institutions in the water sector.	Planned	0	4	11	17	17	5	Regional workshop on water supply and sanitation; Regional workshop on irrigation modernization; 2 national WSS trainings, 4 NHMS trainings, 3 Living Labs learning events, 6 Afghanistan-Tajikistan consultative meetings on hydromet information exchange.
	Actual	0	4					Regional workshop on water supply and sanitation; Regional workshop on irrigation modernization; 2 Afghanistan-Tajikistan consultative meetings on hydromet information exchange.
Number of participants in learning activities (% female).	Planned		260	380	510	510	TBD	
	% female		15	20	30	30		
	Actual		263	285				
	% female		15	16				
% of participants (% female) who consider outcomes of training events as relevant and have integrated them in their work.	Planned		80	80	80	80	70	
	Actual % women		77				30	

Component: Supporting Investments.

Baseline: Few current investment decisions consider transboundary implications of water use and/or quality impacts.
February 2017 status: No outcome yet.

Indicator	Cumulative Values by Year							Expected Outputs
	Planned Actual	'18	'19	'20	'21	'22	TARGET	
Number of national-level water investments identified based on CAWEP diagnostic analysis.	Planned	0	1	1	1	1	1	Potential Vakhsh Basin development.
	Actual	0	0					Potential investments will be discussed after completion of the assessment.
Number of water investments under preparation.	Planned				1		1	North Aral Sea Development and Revitalization Project.
	Actual							
Number of potential beneficiaries of investments supported (% female).	Planned						TBD	
	% female							
	Actual							
	% female							

PILLAR-LEVEL OUTCOMES: ENERGY SECURITY

Component: Data and Diagnostic Analyses.

Baseline: Opportunities and constraints to improve energy sector efficiency are not systematically analyzed and/or are not owned by riparian governments. National energy sector plans do not exist in all countries. **February 2017 status:** Informed Tajikistan Energy Sector Plan 2015-2017 and heating sector policy reform in the Kyrgyz Republic.

Indicator	Cumulative Values by Year							Expected Outputs
	Planned Actual	'18	'19	'20	'21	'22	TARGET	
Number of quality and relevant analytical outputs related to energy sector efficiency improvement and system planning, service reliability, harmonization of trade regulations or similar topics aiming to promote energy security and regional trade.	Planned	0	3	7	8	8	6	Program for financial recovery of Barqi Tojik; Expenditure program for maintenance of assets in Tajikistan; Report with recommendations on improvement of power purchase agreements in Tajikistan; Assessment of options for regional electricity trade and electricity market integration; Regional power system model for Central Asia; Report on potential electricity trade and interconnections; Report on legal, institutional, regulatory and pricing framework of the electricity sectors of Central Asia countries; Recommendations for Naryn River Basin hydropower development and for power systems expansion trajectories.
	Actual	3	4					Updated program for financial recovery of Barqi Tojik; Financial model and expenditure program for maintenance of assets; Report with recommendations on improvement of power purchase agreements in Tajikistan; Regional power system model for Central Asia.

Component: Institutions, Capacity and Dialogue.

Baseline: Institutional capacity in countries varies; in some country's institutions are weak with poor financial performance. Coordination among countries in the energy sector initiated. CAREC has mandate as a regional energy institution (CAREC Energy Action Plan was approved in 2009). Active donors in the region and in countries have disparate coordination. **February 2017 status:** BT strengthened, and CAREC Energy Sector Coordination Committee, Donor Coordination Council in Tajikistan. CASA-1000 Master Agreement, PPAs and Coordination Agreement agreed, Tajikistan Energy Sector Dialogue, Energy Donor Coordinating Committee convened, coordination enhanced and CAREC ESCC supported.

Indicator	Cumulative Values by Year							Expected Outputs
	Planned Actual	'18	'19	'20	'21	'22	TARGET	
Number of energy sector institutions supported through capacity strengthening activities (of which regional).	Planned		8	8	8	8	6	Uzbekhydroenergo JSC; Hydroproject Design Institute; CDC Energia; KEGOC in Kazakhstan; NESK in the Kyrgyz Republic; BT in Tajikistan; Kuvvat in Turkmenistan; Da Afghanistan Breshna Sherkat.
	Regional	1	1	1	1	1	1	CDC Energia
	Actual	7	7					All above planned except for TM Kuvvat.
	Regional	1	1					CDC Energia.
Number of regional frameworks supporting energy security that are being formulated with support from CAWEP.	Planned						1	
	Actual							

Number of learning or dialogue activities that strengthen capacity of institutions in the energy sector.	Planned		5	8	8	8	8	Study tour for CDC Energia on regional power system planning and operations; three trainings for national energy sector institutions; two capacity building activities for Uzbekhydroenergo and Hydroproject design institute; two regional dialogue workshops between Afghanistan and Central Asia.
	Actual	2	6					Study tour for CDC Energia on regional power system planning and operations; study tour and workshop for Uzbekhydroenergo and Hydroproject design institute; three trainings for national energy sector institutions.
Number of participants in learning or dialogue activities (% female).	Planned		260	300			120	Includes participants in above workshops and CAREC Energy Sector Coordinating Committee meetings.
	% female		20				40	
	Actual	149	267					
	% female	11	23					
Percentage of participants (% women) who consider learning contents as relevant and have integrated them in their work.	Planned						70	
	% female						30	
	Actual							
	% female							

Component: Supporting Investments.

Baseline: The Central Asia Power Systems (CAPS) is weak and has started to disintegrate since 2009. Countries occur financial loss due to the disintegrated trading system. Few current investment decisions on water and energy take into account the transboundary implication. Tajikistan and Kyrgyz Republic have winter energy deficit; new investments would have to consider how to alleviate this deficit considering downstream summer irrigation water needs and the regional water allocation system. **February 2017 status:** CASA-1000, Tajikistan Winter Energy Program, Kyrgyz Republic Heat Supply Improvement Project and Nurek Hydropower Rehabilitation Project informed.

Indicator	Cumulative Values by Year							Expected Outputs
	Planned Actual	'18	'19	'20	'21	'22	TARGET	
Number of energy investments identified based on CAWEP diagnostic analysis (of which regional).	Planned	0	0	2	2	2	2	Potential Naryn cascade; Identification of a transmission interconnection upgrade project or a potential new cross-border transmission project.
	Regional						1	
	Actual							
	Regional							
Number of energy investments under preparation (of which regional).	Planned	0	1	2	2	2	4	Tajikistan Power Utility Financial Recovery Program; Tajikistan Rural Electrification Project.
	Regional						1	
	Actual	0	1					Tajikistan Power Utility Financial Recovery Program
	Regional	0	0					
Number of potential beneficiaries of investments supported (% female).	Planned			23,000	23,000	23,000	TBD	
	% female		49	49	49	49		
	Actual							
	% female							

PILLAR-LEVEL OUTCOMES: WATER-ENERGY LINKAGES

Component: Data and Diagnostic Analyses.

Baseline: No robust recent analysis of links between energy and water. Climate change implications for energy and water resources management are poorly understood at both national and regional levels. **February 2017 status:** Public data made accessible through Spatial Agent App; Central Asia Atlas; diagnostic studies (e.g. Strengthening Analysis for IWRM in Central Asia, Turn Down Heat III, Role of Glaciers in the Hydrologic Regime of the Amu and Syr Darya Basins).

Indicator	Cumulative Values by Year							Expected Outputs
	Planned Actual	'18	'19	'20	'21	'22	TARGET	
Number of analytical outputs related to water-energy linkages, climate change, integrated water resources management at regional level or related topic.	Planned		1	3	6	8	3	Report on the needs assessment in IWRM training; IWRM-related methodology/guidelines; Stocktaking assessment of gender issues in IWRM; sedimentation assessment; framework for economic valuation of ES for Tajikistan; technical report on studies for the lower and upper sections of the Vakhsh Basin; sedimentation assessment and report on ROAM analysis for the Kygyz Republic
	Actual	0	2					Report "Stocktaking review and mapping of IWRM knowledge and capacity building initiatives by international partners in Central Asia"; Report "Review of water-related academic and research capacity in Central Asian countries" produced by the team of Central Asian experts.
Number of platforms for data access, analysis or sharing established at regional level.	Planned	0	1	1	1	1	1	Web-based Central Asian nexus data platform.
	Actual	0	1					*Central Asia Water and Energy Data Portal*
Number of platform users (% female).	Planned		400	400	400	400	TBD	
	% female							
	Actual		400					
	% female		50					
% of users indicating being satisfied with access to and contents of platform information.	Planned		90	90	90	90	90	
	Actual		85					

Component: Institutions, Capacity and Dialogue.

Baseline: Regional institutions are weak; national institutions lack physical and human resource capacity to consider energy-water linkages and work across borders. Systems for data sharing and capacity to access publicly available data sets is weak. **February 2017 status:** Capacity development for CAREC, EC-IFAS, ICWC and for youth and young professionals with Kazakh German University. Regional Dialogue continues to falter because of political tensions and weak regional institutions. CAREC (x2) and IFAS have potentially important roles to play. Regular communication among technical institutes is not happening. Active donors in the region have disparate coordination. Dialogue and donor consultative group; First Deputy Prime Ministers Meeting on Regional Riparian Issues convened; Second Central Climate Knowledge Forum led to joint decision for CAMP4ASB.

Indicator	Cumulative Values by Year							Expected Outputs
	Planned Actual	'18	'19	'20	'21	'22	TARGET	
Number of regional institutions supported through capacity strengthening activities.	Planned					2	2	EC-IFAS; Central Asia Regional Environmental Center.
	Actual							
Number of regional frameworks that are being formulated with support from CAWEP.	Planned		1			2	1	Regional vision on water development, engagement stategy.
	Actual		1					*Water security brochure.*
Number of multi-country learning activities.	Planned	1	5	10	10	10	5	Cross-country knowledge exchanges.
	Actual	1	6					Study tour of Tajik institute to Uzbek TIIAME; Cross-country knowledge exchanges (peer-to-peer trainings, Summer School).
Number of participants in multi-country learning activities (% female).	Planned		180	200			TBD	
	% female							
	Actual	5	188					Study tour of Tajik institute to Uzbek TIIAME; Cross-country knowledge exchanges.
	% female		42					
Percentage of participants (% female) who consider outcomes of training events as relevant and have integrated them in their work.	Planned						75	
	% female						20	
	Actual							
	% female							
Number of dialogue events promoting regional cooperation (of which regional).	Planned	8	13	16	19	21	10	CAY4Water and Gender Water Forum activities; Youth to Youth IWRM Initiatives in the context of CAY4Water; Annual Central Asia (plus Afghanistan) Scientific-Practical Conference on special IWRM issues with participation of academia and youth; Central Asian Women in Water – issues and opportunities" – regional conference; 16 donor coordination meetings; Disruptive technologies challenge.
	Regional	8	13					
	Actual	8	16					13 donor coordination meetings; 1 pre-conference event for high level conference in Tajikistan; 2 Youth to Youth IWRM Initiatives in the context of CAY4Water; Pre-conference academic event.
	Regional	7	15					
Number of participants in dialogue events (% female).	Planned	160	250				TBD	Participants in above mentioned events.
	% female		40					
	Actual	164	269					
	% female	70	50					
% of participants (% female) who consider outcomes of dialogue events as relevant and have integrated them in their work.	Planned						75	
	% female						20	
	Actual	30						Note: not all activities (e.g. donor meetings) track this indicator
	% female	10						

Component: Supporting Investments.

Baseline: Earlier regional nexus projects have not been successful in achieving regional outcomes and cooperation. Few current investment decisions on water and energy take into account transboundary implications and the nexus. **February 2017 status:** Assessment Studies for Rogun; CAHMP; CAMP4ASB Series of Projects; CAWaRM preparation informed.

Indicator	Cumulative Values by Year							Expected Outputs
	Planned Actual	'18	'19	'20	'21	'22	TARGET	
Number of regional investments under preparation.	Planned						1	
	Actual							
Number of potential beneficiaries of investments supported (% female).	Planned						TBD	
	% female							
	Actual							
	% female							

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