Statement of Objectives

I. Title

USAID's Central Asia Regional Water and Vulnerable Environment Activity.

II. Introduction

The new USAID's Central Asia Regional Water and Vulnerable Environment Activity seeks to strengthen regional cooperation on shared water resources and address current and emerging environmental challenges to promote stability, economic prosperity and healthy ecosystems in Central Asia. This will be achieved by 1) building the human and technical capacity of water stakeholders and institutions in all Central Asian countries; 2) supporting the sustainability of the transboundary Small Basin Councils established under USAID's Smart Waters project and scaling them up to expand their reach; 3) enhancing government initiatives at national and regional levels to support transboundary water cooperation, and 4) sustainably addressing emerging environmental challenges in the region.

USAID's Central Asia Regional Water and Vulnerable Environment Activity will build on past and current USAID and other investments in regional water cooperation as well as broader natural resources management. The activity will support USAID's objectives in environment and water by expanding and strengthening understanding of critical water, agriculture and energy sector linkages, and utilizing emerging opportunities in countries of the region to ensure long-term sustainability of water and environmental resources to support governance, as well as economic and environmental benefits.

Context

The expected period of performance for USAID's Central Asia Regional Water and Vulnerable Environment Activity is five years (FY 2020-FY 2025). Activities under USAID's Central Asia Regional Water and Vulnerable Environment Activity will be implemented throughout Central Asia and will focus on five countries: Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan. If funding for Afghanistan became available, then project components will also be implemented in Afghanistan. USAID's Central Asia Regional Water and Vulnerable Environment Activity's flexible mechanism will include two separate Contract Line Item Numbers (CLIN)s that allow for effective and efficient implementation; CLIN 0001 of this contract will focus on shared water resources within Central Asia, and proposed activities under this CLIN should target areas with high potential for conflict over access to those shared water resources. CLIN 0002 of this contract will focus on technical assistance to address emerging environmental challenges in the region. This Statement of Objectives (SOO) will allow Offerors to propose and price solutions that achieve the outlined objectives of this contract and contribute to measurable improvements in transboundary water resources management and environmental protection in the region. The Contractor shall locate its activity headquarters in Almaty to ensure effective coordination with USAID/Central Asia and provide technical experts in other cities in the region as needed.

For the purpose of this SOO, whenever the following terms are used, they refer to the following:

"Educational institutions": a wide range of organizations, including all of the following: research institutions, academic institutions, public service academies, and think tanks.

"Region": the five Central Asian countries of Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan. The activity will also look for opportunities to connect and coordinate with Afghanistan, which shares water resources with the region, and may accept a limited amount of funding from Afghanistan in the coming years. However, at this time,

groundwork in Afghanistan is not envisioned, but if funding for Afghanistan become available, applicable USAID's Central Asia Regional Water and Vulnerable Environment Activity components will be implemented in Afghanistan, and Afghanistan will be considered as part of the term "Region" referenced above and only for components that are covered by Afghanistan's funding.

"**Transboundary Water**": shared water resources within Central Asia and Afghanistan and excludes transboundary or shared waters with any other neighboring countries.

Relevance to U.S. and Central Asian government priorities

USAID's Central Asia Regional Water and Vulnerable Environment Activity will directly support the Mission's Regional Development Cooperation Strategy (RDCS) 2015-2020 DO 2 *Enhanced cooperation on shared water resources*, as well as USG's Global Water Strategy (2017) Strategic objectives 3 & 4: *Reduce conflict by promoting cooperation on shared waters* and *strengthening water sector governance, financing and institutions*.

Additionally, the activity supports the United States Strategy for Central Asia's Policy Objective 1: S*upport and strengthen the sovereignty and independence of the Central Asian States, individually and as a region*, and Strategic Objective 4: *Encourage connectivity between Central Asia and Afghanistan*.

USAID's Central Asia Regional Water and Vulnerable Environment Activity will strongly support the U.S. Department of State's C5+1 initiative which seeks to strengthen connections within Central Asia, facilitating regional cooperation and lasting progress for regional stability and economic growth in Central Asia.

USAID's Central Asia Regional Water and Vulnerable Environment Activity will build on and expand the results achieved through USAID's Smart Waters Activity and other environmental activities in the region. By enhancing the capacity and commitment of countries in the Region to own and implement solutions to their development challenges, set and implement transparent policies, allocate resources fairly, deliver services efficiently and equitably, and adapt to changing circumstances, USAID's Central Asia Regional Water and Vulnerable Environment Activity will also support those partner countries on their journeys to self-reliance.

Despite general political commitment to cooperation, water policies in Central Asia are largely driven by uncoordinated and partly contradicting national strategies, and with no regional legal framework for meaningful cooperation.[1] USAID's Central Asia Regional Water and Vulnerable Environment Activity's focus on regional cooperation to generate economic benefits and stability will also improve resilience and resistance to any outside influences in the region.

Current USAID Activities

Smart Waters seeks to build a cadre of professionals in Central Asia and Afghanistan who are capable of managing shared water resources to maximize the economic value of water equitably over the long term in the face of climate change and other pressures, understand the value of such practices, and trust each other. USAID has created 13 Small Basin Councils (SBCs) that work at eight small transboundary rivers, and which take ownership in water management and collaboration, across the river and on regional forums. SBCs are represented by the local governor's office, health, emergency, border control, Waters Users Associations, academia, civil society, and media. Smart Waters has helped Afghans connect to Central Asian countries as partners, reconnected academics in the water sector who now exchange curricula,

[1] https://www.adelphi.de/en/publication/rethinking-water-central-asia

students, deliver webinars and research findings, established a network of students throughout the region through a two-year Masters program in IWRM, and formed a Regional Steering Committee consisting of national partners from five Central Asian countries and Afghanistan for regular interaction. The Regional Steering Committee is represented by the Ministries of Foreign Affairs, technical ministries responsible for water resources management, environmental ministries and academia, from all project targeted countries.

C5+1 Supporting National and Regional Adaptation Planning project has helped the five Central Asian countries to identify and prioritize environmental risks to key economic and development sectors and select options for addressing those risks through developing national adaptation plans. The project helped to identify potential shared approaches to cross-border adaptation and provided technical assistance and capacity building support for national planning.

Partnership for Enhanced Engagement in Research (PEER) is an international grants program that funds scientists and engineers in developing countries who partner with U.S. government-funded researchers to address global development challenges. In Central and South-Central Asia, PEER focuses on various research on climate change and transboundary water, and the program has supported 17 research partnerships on topics related to water management and climate change.

Power the Future project supports clean energy projects, private sector investment, and energy efficiency, and to create an economically viable market based regional power system that would enhance energy security for CA countries. Under Power the Future, USAID is providing assistance towards the establishment of a Central Asia Regional Electricity Market, which will also address the nexus of water-energy demands for Central Asia.

Other donors

Most of the major international development organizations, including donor agencies and multilateral development banks, have ongoing activities in the water and environment fields in Central Asia. Below is a list of donors that may have projects intersecting with USAID's Central Asia Regional Water and Vulnerable Environment Activity's objectives:

- World Bank
- Asian Development Bank
- The Organization for Security and Co-operation in Europe (OSCE)
- German Gesellschaft für Internationale Zusammenarbeit (GIZ)
- Swiss Agency for Development and Cooperation
- United Nations Regional Centre for Preventive Diplomacy for Central Asia (UNRCCA)
- European Union
- United Nations Development Program

III. Background and Regional Context

Central Asia is located in an arid and semi-arid zone, making the region sensitive to environmental fluctuations. The past use of the region for nuclear testing and massive cotton production and overgrazing also made the ecosystems fragile, negatively impacting human health and natural resources.

The availability of renewable water resources per capita has been declining across the region over the past several decades. Furthermore, existing water resources are inefficiently managed, polluted, and unequally distributed among the countries of Central Asia, triggering and

exacerbating environmental, economic and social problems. At the base, many of these issues point to gaps in proper land management, insufficient data and evidence to inform policy, and weak education on sustainable land and water management. A 2017 report by the World Bank forecasts that by 2050, more efficient use of water could boost the region's economy by over one-fifth compared to the current usage pattern.[2] More efficient water use and more effective cooperation on water resources are urgently needed.

Regional dialogue on shared water resources is often framed in the context of "upstream" versus "downstream" countries. Under the Soviet Union, Central Asia had an irrigation and hydropower allocation system that was managed centrally by Moscow. The water energy exchange system allowed the upstream countries of Kyrgyzstan and Tajikistan to store water in the winter, forgoing their hydropower generating potential, but were provided with gas, coal, and thermal power by the downstream energy rich countries of Kazakhstan, Uzbekistan, and Turkmenistan. In return, the upstream countries provided irrigation needs to downstream countries in spring and summer. This Soviet system in that form was not only autocratic in the sense that countries involved had minimal control over water allocation, but it was also unsustainable and led to adverse environmental and ecological impacts in the region such as the Aral Sea disaster. After the collapse of the Soviet Union this allocation system collapsed as well relieving the region from some of the system's adverse environmental impacts, but also increasing tension between the newly independent states. The downstream countries started selling their fuel at higher world prices rather than providing fuel to the upstream countries for a lower price. As a result, the upstream countries began releasing stored water in the winter to generate hydroelectric power, which led to downstream flooding in winter and insufficient water for irrigation during spring and summer months, leading to tensions in the region.

For the past two decades, Central Asian countries have mainly been taking a short term and nationalistic approach to water resources management without considering regional needs or opportunities beyond their own borders, and governments failed to invest in modernizing their energy and agriculture infrastructure and policies increased their mutual dependence on each other.

Due to the lack of reservoirs, canals, and water infrastructure in Afghanistan, only 30-35% of water generated by mountain runoff stays in the country, with the rest flowing into Tajikistan, Turkmenistan, Uzbekistan, Pakistan, and Iran. The Central Asian countries have a cautious attitude towards cooperating with Afghanistan, due to political instability. Similarly, Afghanistan has also demonstrated caution regarding developing closer ties with the Central Asian water management institutions due to the existing tensions among those countries, although it has cooperated bilaterally with Tajikistan in the upper Amu Darya basin. Because of the transboundary nature of watersheds and basins across Central Asia, Afghanistan was integrated into USAID programming in the region under Smart Waters described in the section above.

All five Central Asian countries signed a regional water agreement in 1992 followed by several agreements on the Aral Sea (1993), Syrdarya energy-water agreement (1998), declarations on regional cooperation (Nukus, 1995; Dushanbe, 2003; Issyk Kul, 2009) and others. Those legal frameworks were intended to help countries take coordinated approaches in managing their shared water resources in the region. However, these frameworks were either declarative and

[2] http://documents.worldbank.org/curated/en/979261502174391564/pdf/117997-Central-asia-energy-water-development-program-WP-PUBLIC.pdf 2017

not fully implemented by the countries, lacked constructive legal norms for implementation, or are outdated and need to be revised.

The dominance of national interests and the lack of an effective legal framework for managing transboundary waters have limited cooperation in the region. Non-implementation itself has been a factor undermining cooperation on water management and feeding into lack of trust between countries in the region, even if the cause was due to lack of capacity or structures for implementation more than lack of desire to implement the agreements. In 2009, the EU created a platform for Environment and Water Cooperation in Central Asia, but participation is limited to EU heads of delegations and Ministers from the water and environment sectors.

The entire region is vulnerable to the impacts of climate change which will largely be manifested through water. According to USAID's Climate Risk Profiles for the Region, increased temperatures, reduced precipitation, decreased river flows, and extreme weather will severely impact both agriculture and energy sectors in the near future. Environmental sustainability in the region will be further compromised by the lack of regional cooperation to address the interlinkages of the water-energy-and agriculture sectors.

The 2017 report "Rethinking Water in Central Asia: The costs of inaction and the benefits of water cooperation" detailed the causes of limited water cooperation in the region, documented the economic value of cooperation and the costs of inaction on transboundary water management, and identified entry points for mutually beneficial solutions.[3] With population growth projections of 30% by 2050, outdated water infrastructure that is unable to respond to natural disasters and emerging environmental challenges, as well as low capacity of local regulatory officials, Central Asian countries must find a path for future cooperation in order to effectively manage water resources in the region in order to reap these multiple benefits.

IV. Problem Statement

Balancing the needs for water, food, and energy is crucial for long-term sustainable economic growth and human wellbeing in the Region because of the strong linkages and interdependencies among the three sectors. Activities in one sector have proven to influence or even constrain economic growth in other sectors. For example, competition over scarce water and energy resources can lead to price pressures with adverse short-term consequences and irreversible ecosystem changes that impact long term water security.

Weak inter-sectoral linkages within governments, limits of staff capacity, lack of strong regional institutions for cooperation for resources, non-existent mechanisms to exchange regional and local data, and misunderstanding of the needs and impacts of each sector all impede the ability of countries in the region to make decisions or take actions to develop and implement integrated solutions.

Opportunities for mutually beneficial responses that enhance potential for cooperation among stakeholders in all three sectors are possible; and if identified and supported, will allow decision-makers to develop appropriate policies, strategies and investments, to explore and exploit these synergies. The 2017 report "Rethinking Water in Central Asia" identifies such opportunities.

Because water is a strategic resource for both national development and regional security, it is critical that both men and women are engaged at all steps of managing the resource, tapping the full suite of technical and social science expertise. A stronger gender, conflict management, and social science perspective can help overcome some of the recurring barriers related to

[3] https://www.adelphi.de/en/publication/rethinking-water-central-asia

water allocation and management. This produces decisions that are more responsive to the needs of the entire population, which in turn reduces social tensions and can help prevent water-related conflict at the local, national, and regional levels. By effectively managing their own water resources and closely cooperating with neighbors to manage shared waters, Central Asian countries can become more self-reliant while ensuring sustainable economic growth and regional stability.

V. Theory of Change and Results Framework

The Theory of Change for USAID's Central Asia Regional Water and Vulnerable Environment Activity is:

If:
Capacity for, and implementation of, sustainable management of transboundary waters and the environment are increased in the region;

Then:
Economic prosperity will be enhanced;

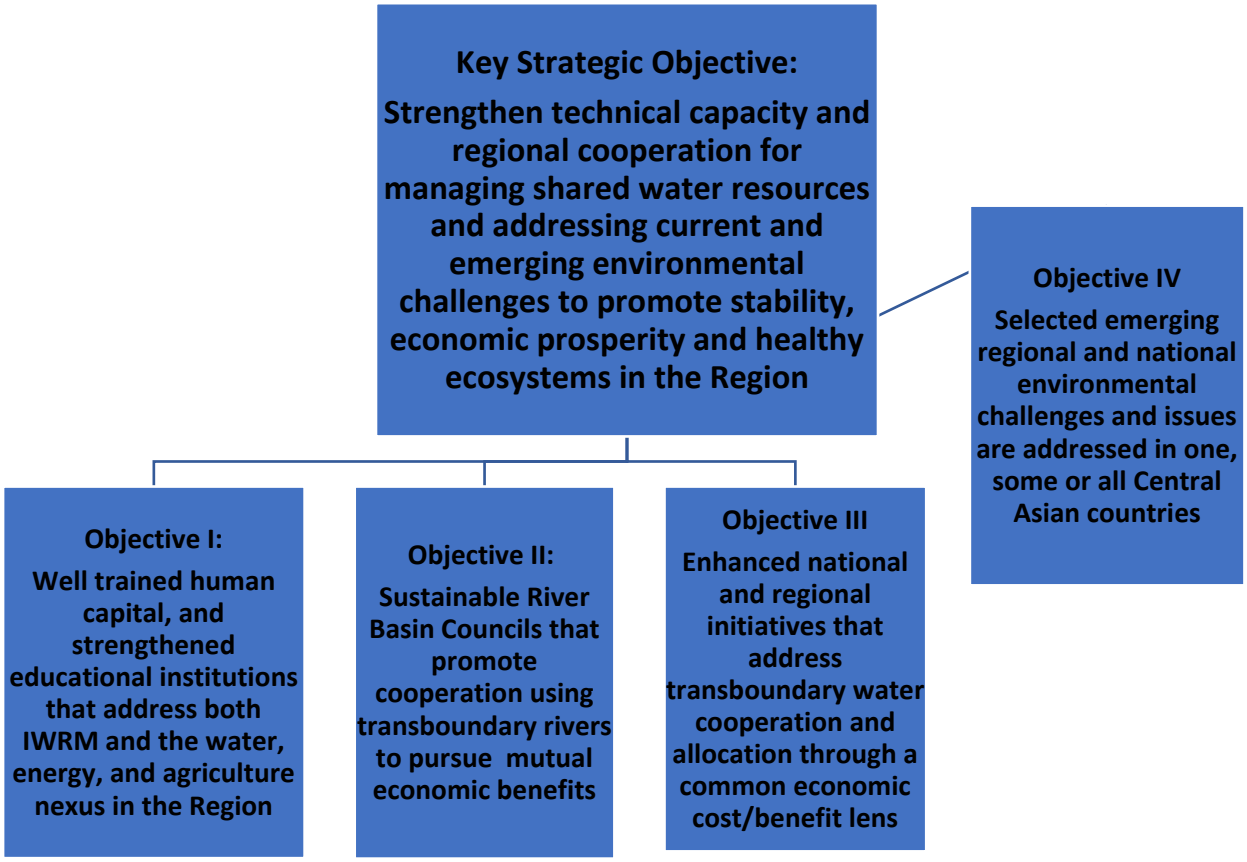
Disputes and conflicts over the use of shared natural resources will be reduced; and

Countries individually and collectively will be more resilient and self-reliant.

The goal of USAID's Central Asia Regional Water and Vulnerable Environment Activity is to strengthen technical capacity and regional cooperation for managing shared water resources and addressing current and emerging environmental challenges to promote stability, economic prosperity and healthy ecosystems in Central Asia. This will be accomplished under two contract line item numbers (CLINs). The first CLIN is focused specifically on transboundary water management, and the second CLIN is a flexible mechanism for responding to emerging regional and national environmental challenges and issues in one, some or all Central Asian countries during the life of the activity.

The Results Framework is shown below in Figure 1.

VI. USAID's Central Asia Regional Water and Vulnerable Environment Activity Results Framework



Goal: Strengthen technical capacity and regional cooperation for managing shared water resources and addressing current and emerging environmental challenges to promote stability, economic prosperity and healthy ecosystems in the Region.
CLIN 0001
Objective I **Well trained human capital, and strengthened educational institutions that address both IWRM and the water, energy, and agriculture nexus in the Region**
IR 1.1 Develop/adapt and support implementation of multidisciplinary short-term training and degree programs at national educational institutions in all Central Asian countries to promote understanding and impacts of energy, water and agricultural interlinkages and IWRM principles
IR 1.2 Build the technical capacity of water stakeholders and policy makers by linking them to the institutions supported under IR 1.1 in their respective countries and create channels that link research results (evidence) to policy makers (action).
IR 1.3 Promote stronger networking between and among water and environment scholars across the region and globally
Objective II

Sustainable River Basin Councils that promote cooperation using transboundary rivers to pursue mutual economic benefits
IR 2.1 Build-up the sustainability of Small Basin Councils (SBCs) established under USAID's Smart Waters to ensure the continuity of their structure and operations beyond donor funding
IR 2.2 Support the needs of larger river basin councils and link them with decision makers and SBCs
IR 2.3 Utilize science, technology, innovation, and partnerships to pilot and demonstrate the benefits of Integrated Water Resources Management and/or water and irrigation nexus
Objective III **Enhanced national and regional initiatives that address transboundary water cooperation and allocation through a common economic cost/benefit lens**
IR 3.1 Support national governments to implement priority actions related to water or environment management and governance
IR 3.2 Support and strengthen Smart Waters-created Regional Steering Committee platform as a convening entity for exchange of information and best practices in water and environment sectors
IR 3.3 Support countries to revisit the legal/regulatory framework and agreements, and identify and address the obstacles for their implementation
IR 3.4 Collaborate with USAID/CAREM and other donor funded projects that address water needs for hydropower generation and irrigation across the target region
CLIN 0002
Objective IV **Selected emerging regional and national environmental challenges and issues are addressed in one, some or all Central Asian countries**
IR 4.1 Identify and address selected emerging environmental challenges in the region.

VII. Performance Objectives and Results

Interventions must incorporate all of the guiding principles described below. Although both CLINs are environmental in nature, however, the two CLINs may require different technical skills and approaches and the contractor needs to keep that in mind through the life of the Activity.

The objectives required to reach this goal include:

- Well trained human capital and strengthened educational institutions that address both IWRM and the water, energy, and agriculture nexus in the Region (CLIN 0001).
- Sustainable River Basin Councils that promote collaboration among the parties using transboundary rivers to support mutual economic benefits (CLIN 0001).
- Enhanced national and regional initiatives to address transboundary water cooperation issues through a common economic cost/benefit lens (CLIN 0001).
- Selected emerging regional and national environmental challenges and issues are addressed in one, some, or all Central Asian countries (CLIN 0002).

Each of these objectives, along with performance standards, is described in more detail below.

Objective I: Well-trained human capital, and strengthened educational institutions that address both IWRM and the water, energy, and agriculture nexus in the Region

Central Asia already experiences competition for water to meet energy and agriculture needs within and among the countries, and this will intensify in the future. Overcoming these

challenges will require a long-term educational strategy that includes incentives to attract and keep experienced specialists in educational institutions while addressing the social, economic, and political realities of the hydro-interdependence in the region.

The region has fragmented educational institutions with scientific capacity and equipment gaps for water monitoring, measuring, forecasting, and planning, while negotiation and communication skills are essential for inclusive decision making that fosters regional cooperation. Courses and curricula, both practical and theoretical, to address the challenges of equitable transboundary water management either do not exist, or need to be revised, and institutions and academics need more exposure to their peers in the region and globally.

Educational institutions have important roles in improving the management of water resources through generating or acquiring and analyzing data across social and natural sciences, and through multidisciplinary training of current and future water managers. Research and data on transboundary resource management and water allocation need to be institutionalized. Greater collaboration and hydromet data sharing and information exchange, with multiple scales of data from satellites, sensors, and citizen scientists will be part of the solution.

Transboundary water resources management in the region is complex and dynamic because water touches on multifaceted social, economic, national, and historic elements that impacts many in the region. Understanding the socioeconomic and historic angles of such challenges, would help design better solutions to conflict over water in the region. This leadership challenge will require a multidisciplinary approach that includes social science theories and methods to increase awareness of and engagement with water issues and provide transformational leadership that champions innovation, civic capacity, community building, alternative dispute resolution, and multiple objective planning in water resource management.[4]

Developing and implementing effective educational approaches is critical to educating the next generation of water managers, engineers, farmers, and scientists so they understand the interrelated systems and can contribute to the processes taking place among different sectors dependent on transboundary watersheds and resources.

Illustrative activities under this objective include:

- Review relevant courses and curricula at educational institutions across the region; develop a strategy for each institution and modify/develop curricula as necessary to address gaps in content related to IWRM and transboundary energy, water, agriculture nexus; support educational institutions to incorporate new/revised courses and curricula
- Identify, support and create networks for water and environment professionals within and among countries in the region and globally, with special focus on women and on young professionals
- Reach down to community level through citizen scientists programs, and link educational institutions and researchers to policy makers
- Develop a joint multidisciplinary Masters degree program across the premier water academic institutions in the region
- Utilize available research conducted under USAID's Partnership for Enhanced Engagement in Research (PEER) to bridge the gap between research results and actions by policy makers, for example research on climate change impacts on future

[4] https://onlinelibrary.wiley.com/doi/full/10.1111/j.1936-704X.2009.00056.x Journal of Contemporary Water Research & Education. A Long Term View of Water and International Security. 2009. Aaron T. Wolf https://doi.org/10.1111/j.1936-704X.2009.00056.x

river flows can be utilized to demonstrate how findings can be integrated into regional initiatives and cooperation.

Performance Standards: To achieve this objective, the Contractor must achieve the following results:

IR 1.1 Develop/adapt and support implementation of multidisciplinary short-term training and degree programs at national educational institutions to promote understanding and impacts of energy, water and agricultural interlinkages and IWRM principles

IR 1.2 Build the technical capacity of water stakeholders and policy makers by linking them to the institutions supported under IR 1.1 in their respective countries, and create channels that link research results (evidence) to policy makers (action)

IR 1.3 Promote stronger networking between and among water and environment scholars across the region and globally

Objective II: Sustainable River Basin Councils that promote cooperation using transboundary rivers to pursue mutual economic benefits

With this objective, the project will test both the transboundary resource management and nexus approach with selected Small Basin Councils (SBC) at the Smart Waters-targeted transboundary rivers where USAID has had success in helping local communities build constructive and sustainable water dialogues across the borders. The activity will scale up the successful model of SBCs and move to larger geographic coverage of Medium Basin Councils (MBCs) or Large Basin Councils (LBCs) while focusing on the sustainability of these SBCs and help them to become part of the ongoing national programs in the water sector. SBCs are currently not linked to decision making processes around water allocation, and water authorities' policies are not anchored in reality. SBCs do not have an independent, clearly defined mandate relative to other institutions, and lack authority to make decisions related to allocation of water. Membership of SBCs must represent users from a range of sectors including water, energy, agriculture, livestock, forestry, mining, transport, and tourism to ensure all water users are represented. The SBCs need to demonstrate value in water management and strengthen ties to local and national water governance for their own sustainability, and so they can be stronger contributors to larger river management policies in their communities, countries and the region.

Through both SBCs, MBCs or LBCs, USAID's Central Asia Regional Water and Vulnerable Environment Activity will reduce water losses and promote efficient water saving technologies in agriculture based on the IWRM approach, for example through piloting and disseminating successful smart technologies, crop diversification, or water saving technologies. USAID's Central Asia Regional Water and Vulnerable Environment Activity will also use behavioral sciences approaches to support adoption of new practices such as cost-recovery for water services and technologies that result in more efficient or effective uses of water in agriculture to increase trade turnover, e.g. in the Ferghana Valley. Where possible, USAID's Central Asia Regional Water and Vulnerable Environment Activity will link with USAID and other donors' bilateral agriculture programs to support more efficient productive uses of water, and link SBCs and MBCs to educational events related to water management.

When necessary, the activity will work at the policy level to promote the necessary changes in the water legislation that could facilitate the realization of basin planning approach, and institutionalization of the Basin Councils, and create a channel to link SBCs and MBCs to decision makers.

Illustrative activities under this objective include:

- Build the sustainability of Small Basin Councils, link sustainable Small Basin Councils to larger River Basin Councils, and higher-level institutions/structures for water resources management, analyze and strengthen the water value chain from water allocation to agricultural production intended for consumption and/or export
- Conduct a capacity assessment and train water managers and farmers on water saving technologies, crop diversification, and water data management and use
- Pilot small scale infrastructure work or introduce relevant equipment or technologies that contributes to USAID's Central Asia Regional Water and Vulnerable Environment Activity's goal and that have potential to positively impact transboundary relations. All small scale projects or equipment should fall under the STIP umbrella and should have a potential of replicability;

Performance Standards: To achieve this objective, the Contractor must attain the following results:

IR 2.1 Build-up the sustainability of Small Basin Councils (SBCs) established under USAID's smart waters to ensure the continuity of their structure and operations beyond donor funding

IR 2.2 Support the capacity needs of larger river basin councils and link them with decision makers and SBCs

IR 2.3 Utilize science, technology, innovation, and partnerships to pilot small scale infrastructure projects, technologies, and equipment to demonstrate the benefits of Integrated Water Resources Management and/or water and irrigation nexus

Objective III: Enhanced national and regional initiatives that address transboundary water cooperation issues through a common economic cost/benefit lens

Countries recognize the links between water, energy, and agriculture, but not the benefits of a nexus approach for regional cooperation. With this objective, the project will promote regional confidence and connectivity by capitalizing on emerging high-level opportunities in the region, other donors' work, and ongoing political will and the changed behavior of national governments towards improving transboundary water resources management and moving towards a cooperative management framework.

Building on the "Rethinking Waters" report, there is a need for a regional forum to educate and reflect evolving national interests and support valuation of the water resources so that the economic impacts (of collaboration and of lack of collaboration) can be quantified and tracked in the future. Water use should be optimized at basin level, and then effects and benefits of sharing water resources with each country represented should be discussed. This type of mutual understanding and dialogue can only be achieved through the regular meetings of working committees or responsible ministries informed by real data on the value and use of the water resources and is required to calculate equitable allocation and compensation. There is currently no higher ministerial (decision-making)-level representation in existing coordination fora, and participation should involve related ministries such as agriculture, energy, environment, tourism and industry, all of which rely on water resources yet whose voices are currently unheard.

The project will provide demand-driven technical and institutional support to the national governments, regional organizations, regional or bilateral working groups on the natural resources management and environmental aspects, individual sector efforts that directly or indirectly contribute to these areas and/or energy-water-agriculture nexus issue, and

recommendations for reforms of existing national laws that inhibit regional cooperation of shared water and energy. Potential areas of support include reducing the gap in technical capacity for hydromet sharing across countries, harmonizing different standards of data management and operation, capacity of management systems in the line agencies related to water.

At a later stage, the project will facilitate the governments' bringing the individually gained knowledge and expertise for exchange with other countries at the regional events.

The project will help strengthen the Regional Steering Committee, created under Smart Waters, institute a regional body made up of senior officials from all six countries who are empowered to make decisions and seek greater cooperation on regional water issues. This will need full endorsement and support from all the donors and the participating countries.

Illustrative activities under this objective include:

- Support to initiatives such as Green Economy, Water and Energy Consortium, 1998 water-energy agreement, US Department of State water-energy dialogue, and other programs of the governments and partners on establishing a trans-boundary water cooperation framework for the five Central Asian countries Inter-State Commission on Sustainable Development
- Support for harmonizing the existing national water legislation under the principles of IWRM
- Support for creating a workable platform for coordination and for sharing water-related experiences, information and data, for example leveraging NASA's Land Cover/Land Use Change efforts to promote collaboration between remote sensing research organizations via the Central Asia Regional Information Network (CARIN), or utilizing research on the impacts of climate change on glacial melt and future river flows in the region, and how findings can strengthen regional initiatives and cooperation.
- Improve joint site-visits, evidence-based information collection, analysis, sharing and decision making required for transboundary river cooperation, addressing physical and operational gaps such as hydro/met monitoring stations for reliable data on water resources and utilization to inform water resource planning and management

Performance Standards: To achieve this objective, the Contractor must attain the following results:

IR 3.1 Support national governments to implement priority actions related to water or environment management and governance

IR 3.2 Support and strengthen the Regional Steering Committee platform, created under the Smart Waters activity, as a convening entity for exchange of information and best practices in water and environment sectors

IR 3.3 Support countries to revisit the legal/regulatory framework and agreements, and identify and address the obstacles for their implementation

IR 3.4 Collaborate with USAID/CAREM and other donor funded projects that address water needs for hydropower generation and irrigation across the target region

(CLIN 0002) Objective IV: Emerging regional and national environmental challenges and issues are addressed and tackled sustainably in one, some or all Central Asian countries

Offerors must describe their capacity to respond to requests for technical assistance and describe how they will mobilize, and augment resources should a need to address historic or

emerging environmental needs or issues in one, some or all the countries in the region emerge. Examples of interventions may include, but not limited to protected areas, wetlands, glaciers melt and impact on water resources, air pollution, solid waste management, water resources management, the Aral Sea, environmental codes, adaptation planning, resilience, biodiversity, wildlife protection, and environmental remediation and mitigation for mining. The Offeror should demonstrate capability to design comprehensive and sustainable solutions, as well as the ability to access technical expertise in a range of sectors.

VIII. Guiding Principles

To achieve the above objectives, the Contractor must incorporate the guiding principles below in all stages of planning and implementation.

Build on the results of Smart Waters as well as other USAID and donor activities. The Contractor should coordinate closely with existing USAID activities, other donor efforts, and partner governments and should avoid any duplication of effort with these and other development programs, while identifying and capturing strategic opportunities for synergies. The Contractor should draw on experiences within and outside the Central Asia region, for example the U.S.-Pakistan Center for Advanced Studies in Water[5], and USAID/Nepal's work with citizen scientists[6]. The Contractor shall use and build on the Regional Steering Committee created under Smart Waters as a framework to engage national governments and other donors to facilitate dialogue and action on improved transboundary management, using an economic cost/benefit lens that all parties can understand. Also use the established regional networks and connections and cooperate with other regional and bilateral USAID-funded activities to leverage resources to achieve common goals.

Local Partnership. As needed, USAID's Central Asia Regional Water and Vulnerable Environment Activity should seek to identify appropriate partners at the country level and/or at the regional level for carrying out some of its work. In some more restrictive places, there are existing organizations with established networks who can help to facilitate cooperation with relevant authorities and achievement of results. USAID's Central Asia Regional Water and Vulnerable Environment Activity should leverage these partnerships, as appropriate, for achieving its objectives.

Use Systems Approaches. Water management problems arise from complex cross boundary systems and do not respond well to solutions from any single discipline, but require systems approaches. The nature of the relationships among the regional stakeholders and their natural resource base is dynamic, so options and interventions must be responsive to the specific context, for example use of comprehensive context analysis and system mapping, monitoring for emergent or unanticipated impacts, and identifying key leverage points to promote equity and sustainability.[7]

Outreach and Communication. USAID requires strong emphasis on outreach and communication at all stages of planning and implementation. The Contractor is required to hire a dedicated communication specialist as a key personnel to document processes and outcomes, develop and deliver effective messages through multiple channels, and highlight project successes for local, regional and global audiences.

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[5] http://water.muet.edu.pk/about-us/

[6] https://www.climatelinks.org/blog/knowledge-power-engaging-citizen-scientists-improve-health-water-nepal
https://www.dai.com/our-work/projects/Nepal-Program-for-Aquatic-Natural-Resources-Improvement-PANI

[7] https://www.ccsa.ca/sites/default/files/2019-05/nts-systems-approach-system-thinking-complexity-2012-en.pdf

Social and Behavioral lens. Social problems, including natural resource management, are perceived and understood in a variety of ways and are influenced by how men and women are raised and educated, their experiences, and the range of options at their disposal. Strategies to influence and change individual, societal and regional norms and behaviors must draw on the best available social science methods to address past actual and perceived inequities and promote understanding of potential for both shared benefits of collaboration and averted costs from lack of collaboration. Water management is by definition conflict management, since all water management must meet multiple, competing interests. Failure to consider the human aspects of understanding the social and physical contexts (values, histories, biases, beliefs, and desired futures) can result in litigation, enforcement, education, and create a cycle of mistrust that is very difficult to reverse.[8]

Science, Technology, Innovation, and Partnerships (STIP). The project will identify and pilot promising innovative approaches in transboundary water management and promote sustainable water resources management and enhanced environmental prosperity through emphasis on Science, Technology, Innovation and Partnerships (STIP) as well as private sector engagement. This approach will help introduce pilot projects, approaches or equipment that are scalable and replicable. Private sector may have a role in providing and scaling up new technologies that will be part of the solution of improved water management. There will also be emphasis on transparency through data management and innovation to help build trust among countries in the region. Details on Infrastructure and equipment are detailed in the following section.

IX. Infrastructure and Equipment

The intent of this Contract is to strengthen regional cooperation on shared water resources and address current and emerging environmental challenges. USAID's Central Asia Regional Water and Vulnerable Environment Activity is not an infrastructure project nor does it have the budget or engineering oversight for large infrastructure. The contractor should adhere to the following when designing or implementing small scale infrastructure projects.

- The Contractor should seek to leverage other investments in infrastructure and/or equipment that will support achievement of USAID's Central Asia Regional Water and Vulnerable Environment Activity's goal.
- Although small scale infrastructure projects may be implemented under USAID's Central Asia Regional Water and Vulnerable Environment Activity, all construction or equipment proposed under USAID's Central Asia Regional Water and Vulnerable Environment Activity will be linked directly to the achievement of the Activity's objectives in transboundary water management in a clear and demonstrable manner.
- The results of any infrastructure or equipment investments under USAID's Central Asia Regional Water and Vulnerable Environment Activity should serve as real case examples on how to better face the challenges and pursue economic prosperity by improving infrastructure or introducing innovative smart technologies such as energy efficiency and water saving methods.
- Before any infrastructure can initiate, an Environmental Monitoring and Mitigation Plan must be prepared by the Contractor and signed off by the COR.
- Engineering oversight will be a key component of the construction and should be budgeted for separately, and a quality assurance plan for any infrastructure should be in place. The Contractor must demonstrate at all phases of construction its ability and

[8] https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2016EF000487

capacity to verify the soundness of any engineering design, and provide oversight over all proposed small-scale infrastructure and specifically state how engineering oversight will be conducted and by whom.

- In addition to the Contractor's quality assurance and oversight, USAID will use its internal processes to ensure the soundness of engineering designs. All USAID safeguards and guidelines related to construction will be adhered to during implementation, and all infrastructure and equipment will be proposed to the COR for review and approval. Information on USAID's preferred approach to Construction Risk Management is available online.
- The total allocated budget for construction under USAID's Central Asia Regional Water and Vulnerable Environment Activity will not exceed $900,000, divided over the five Central Asian countries. There will be a $180,000 cap on the maximum allocated budget per country for construction of all small-scale infrastructure, equipment, and pilot work.
- Infrastructure pilot projects and proposed equipment funded by the project, should fit under the STIP umbrella. Each country can implement several STIP small-scale infrastructure projects that are tied directly to achieving the project's goals. If, in an exceptional case, there is a strong case for allocating any country's full budget for one innovative and strategic project, then this can be approved only if strong justification was provided by the contractor. This will be the exception and not the norm.

Illustrative activities of pilot projects that fit under STIP would be demo pilots, water saving technologies, innovative approaches that lead to more efficient water use, installation of transfer stations, etc.

X. Monitoring, Evaluation and Learning

Surveys and Assessments

The Contractor must conduct a survey during the first six months of the activity that will identify and characterize the gaps in knowledge that affect achievement of the goals of USAID's Central Asia Regional Water and Vulnerable Environment Activity, and serve as a baseline to measure progress toward the intended results. This baseline survey must include information from readily available data and/or from independent research as needed.

For Objective 1: Review existing assessments of capacity and relevant curricula and conduct targeted assessments in each country to map and identify gaps in capacities of staff, equipment, and content/training materials and curricula.

For Objective 2: Assess water saving approaches and technologies available in the regional market. Identify promising technologies and approaches that are not yet available in the region or in certain countries and develop plans to introduce them under USAID's Central Asia Regional Water and Vulnerable Environment Activity as relevant.

For Objective 3:

- Compile the country and regional legal frameworks on transboundary water management, and identify any gaps, inconsistencies or conflicting information and obstacles for their implementation.
- Assess recent and current efforts and instruments to support bilateral or regional transboundary water cooperation, identify gaps, obstacles and opportunities.

- Create and maintain a donor map of what sector coordination mechanisms exist, and what organizations are doing what work in the region related to transboundary water management, and opportunities and obstacles that donors have identified.
- Assess existing bilateral or regional cooperation mechanisms on climate change adaptation and water infrastructure development projects.
- Assess USAID/CAREM project and other water/energy projects in the region to identify potential synergies with improved water management.

USAID/Central Asia is dedicated to advancing the broader Agency organizational learning and development policy effort called Collaborating, Learning, and Adapting (CLA), whereby the causal pathways to desired outcomes are continuously assessed so that activities can be adjusted as necessary to implement the most effective course of action. The Contractor will develop a monitoring, evaluation and learning plan (MELP) that will guide the systematic collection and analysis of performance and context information to track progress toward planned results, fulfill the activity learning agenda, and inform planned adaptation in the activity's technical approach. The system described should serve as a management tool to improve development outcomes, and not simply to fulfill a reporting requirement. It should provide the means to inform iterative adaptation, fill identified gaps, test new technical approaches, validate uncertain causal links in the development hypothesis, or respond to a dynamic operating context.