

Institutionalising transboundary water management between Tajikistan and Afghanistan for the Panj River Sub Basin

Part I: Project Information

GEF ID

10714

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

☐ CBIT

☐ NGI

Project Title

Institutionalising transboundary water management between Tajikistan and Afghanistan for the Panj River Sub Basin

Countries

Regional, Afghanistan, Tajikistan

Agency(ies)

FAO

Other Executing Partner(s)

Governments of Afghanistan and Tajikistan

Executing Partner Type

Government

GEF Focal Area

Multi Focal Area

Taxonomy

Pollution, International Waters, Freshwater, Focal Areas, River Basin, Strengthen institutional capacity and decision-making, Influencing models, Beneficiaries, Gender Mainstreaming, Gender Equality, Women groups, Gender-sensitive indicators, Learning, Adaptive management, Capacity, Knowledge and Research, Capacity Development, Chemicals and Waste, Transform policy and regulatory environments, Stakeholders, Type of Engagement, Participation, Knowledge Generation, Knowledge Exchange, Persistent Organic Pollutants, Pesticides, DDT - Vector Management, Partnership, Civil Society, Community Based Organization, Non-Governmental Organization, Academia, Local Communities, Communications, Awareness Raising, Behavior change, Private Sector, Individuals/Entrepreneurs, Large corporations, SMEs, Nutrient pollution from all sectors except wastewater, Nutrient pollution from Wastewater, Transboundary Diagnostic Analysis, Strategic Action Plan Implementation

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 1

Duration

60 In Months

Agency Fee(\$)

759,219.00

Submission Date

9/28/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
IW-3-5	GET	1,498,697.00	10,000,000.00
IW-3-6	GET	4,496,527.00	8,300,000.00
IW-3-7	GET	998,698.00	30,000,000.00
CW-1-2	GET	997,859.00	6,000,000.00
Total Project Cost (\$)		7,991,781.00	54,300,000.00

B. Indicative Project description summary

Project Objective

Establish new operational mechanisms and foster effective transboundary water management between Tajikistan and Afghanistan to manage nexus trade-offs in the Panj River basin.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)

Component 1: Jointly agreed evidence base (Transboundary Diagnostic Analysis) considering climate change, environmental flows, and development related nexus trade-offs.	Technical Assistance	<p>Outcome 1.1: Countries' improved ability to engage successfully in transboundary IWRM (allocation USD 3,000,000).</p> <p>Outcome Indicators (OI): 1) Training a total of 100 key staff in the two countries to building national capacity to undertake quantitative and qualitative water analysis and broader IWRM analysis; and 2) Data and capacity gap analysis approved by the countries.</p> <p>Outcome 1.2: Consensus among countries on key transboundary and national concerns affecting the transboundary Panj River basin, reached through joint fact finding, informs a transboundary water management strategy (allocation USD 1,200,000).</p> <p>Outcome Indicator (OI): Consensus documented by Afghanistan and Tajikistan (e.g. TDA) signed.</p>	<p>Output 1.1.1: Countries' data and information generation capacity for effective IWRM of the Panj River basin established.</p> <p>Output 1.1.2: Countries' management capacity strengthened to support transboundary IWRM in the Panj River.</p> <p>Output 1.2.1: Assessment of current state and projected trends of freshwater resources (incl. groundwater and cryosphere) and of related ecosystems and livelihoods.</p> <p>Output 1.2.2: Assessment of the potential for nature-based solutions in the Panj River basin's existing or planned infrastructure investments.</p> <p>Output 1.2.3: Agreed upon Transboundary Diagnostic Analysis (TDA) of the basin freshwater resources focusing on quantity and quality issues, ecosystem health and related livelihoods, and including consideration of climate change impacts on snow melt dynamics, extreme flood and drought events, water resources governance and gender equality aspects.</p>	GET	4,200,000.00	5,000,000.00
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Component 2: Transboundary water management strategy and action program and underpinning institutional arrangement for the Panj River basin.	Technical Assistance	<p>Outcome 2: Improved water security, community resilience, and environmental sustainability through the implementation of evidence-based action plans.</p> <p>Outcome Indicators (OI): 1) JTC established; 2) Shared vision developed and approved; 3) SAP formally endorsed; 4) National Action Plans revised based on SAP; 5) Agricultural development plans revised; and 6) Infrastructure plans for water management in the Panj River basin revised based on SAP.</p>	<p>Output 2.1: Establishment of Joint Technical Committees (JTC) for major water management issues.</p> <p>Output 2.2: A jointly developed and endorsed water security and community resilience vision for the Panj River basin.</p> <p>Output 2.3: Strategic Action Program (SAP) with horizon of 5-10 years, consistent with the TDA findings and the Shared Vision and including revised agricultural development and water infrastructure investment plans if required endorsed at ministerial level in both countries.</p> <p>Output 2.4: Preparatory actions implemented for countries to develop National Action Plans (NAP) for the Panj River basin translating regional priorities (based on SAP endorsement) into national government and private sector actions.</p> <p>Output 2.5: Foundational agreement endorsed to establish Bilateral Basin Coordination Committee (BBCC).</p>	GET	1,400,000.00	17,500,000.00
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Component 3: Demonstration projects to pilot interventions for improved transboundary water management.	Technical Assistance	<p>Outcome 3: Countries agree on testing joint water management and climate change actions for effective drought and flood risk mitigation, sustainable water and land management, policies, practices and technologies, and share results and experiences.</p> <p>Outcome Indicators (OI): Number of pilot demonstration projects implemented.</p>	<p>Output 3.1: Transboundary data-sharing mechanisms to inform effective drought and flood risk management.</p> <p>Output 3.2: Implementation of nature-based solutions to support drought and flood management, sustainable water and land management, policies, private sector investments, practices and technologies.</p> <p>Output 3.3: Design and field testing of harmonized water monitoring networks and protocols (surface and groundwater).</p>	GET	1,011,220.00	21,500,000.00
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Component 4: Enhanced capacity of key stakeholders, reinforced participatory processes, mainstreamed gender equality focus, and effective project progress monitoring.	Technical Assistance	<p>Outcome 4: Achievement of project outcomes facilitated through effective mechanisms for improved stakeholder consultation, gender mainstreaming, dissemination, coordination and monitoring.</p> <p>Outcome Indicators (OI): 100 national staff skills and knowledge of transboundary and climate change adaptation issues increases by 50% over baseline levels.</p>	<p>Output 4.1: Capacity building in drought and flood management and related aspects of transboundary water management and basin planning.</p> <p>Output 4.2: Water and Gender Action Plans and indicators, based on results of the TDA (Component 1), adopted by relevant authorities in both countries</p> <p>Output 4.3: Annual stocktaking and awareness raising meetings with relevant stakeholders (e.g. local, national and regional meetings)</p> <p>Output 4.4: Periodic events for the coordination with other ongoing initiatives in the Panj River basin and the wider Amu Darya River basin whenever required.</p> <p>Output 4.5: Full participation to GEF IW LEARN activities (1% of project budget), including creation of a project website, and preparation of experience notes.</p>	GET	1,000,000.00	7,500,000.00
Sub Total (\$)					7,611,220.00	51,500,000.00
Project Management Cost (PMC)						

GET	380,561.00	2,800,000.00
Sub Total(\$)	380,561.00	2,800,000.00
Total Project Cost(\$)	7,991,781.00	54,300,000.00

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Donor Agency	ADB & EU (Afghanistan)	In-kind	Recurrent expenditures	15,000,000.00
Recipient Country Government	MEWR & MoF (Tajikistan)	In-kind	Recurrent expenditures	39,000,000.00
GEF Agency	FAORAP	In-kind	Recurrent expenditures	300,000.00
			Total Project Cost(\$)	54,300,000.00

Describe how any "Investment Mobilized" was identified

The co-finance commitments have been identified in discussions with the Governments of Afghanistan and Tajikistan. First, all relevant baseline projects were identified (see Table 1 of the PIF). Then, a subset of investments was identified that has either the potential to contribute and can be directly informed/influenced by the proposed project. The listed investment was labelled "Recurrent expenditures" as these investments would be made even without the proposed GEF project. Consequently, these investments have not been labeled as specific new investments mobilized by the proposed project. To be consistent both contribution from the countries has been tagged as in-kind.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	GET	Regional	International Waters	International Waters	6,993,922	664,423	7,658,345.00
FAO	GET	Regional	Chemicals and Waste	POPs	997,859	94,796	1,092,655.00
Total GEF Resources(\$)					7,991,781.00	759,219.00	8,751,000.00

E. Project Preparation Grant (PPG)

PPG Required



PPG Amount (\$)				PPG Agency Fee (\$)			
200,000				19,000			
Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	GET	Regional	International Waters	International Waters	175,028	16,628	191,656.00
FAO	GET	Regional	Chemicals and Waste	POPs	24,972	2,372	27,344.00
Total Project Costs(\$)					200,000.00	19,000.00	219,000.00

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
3,744,786.00	0.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
3,744,786.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Beshai Palangon (Tigrovaya Balka) reserve, Tajikistan	N/A	Protected Landscape/Seascape	49,786.00						
Tajik National Park, Tajikistan	555556049	National Park	2,600,000.00						
Wakhan National Park, Afghanistan	N/A	National Park	1,095,000.00						

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1100.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1,100.00			

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
25000.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

25,000.00

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted
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Indicator 7 Number of shared water ecosystems (fresh or marine) under new or improved cooperative management

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Shared water Ecosystem	Panj			
Count	1	0	0	0

Indicator 7.1 Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Panj	1			


Indicator 7.2 Level of Regional Legal Agreements and Regional management institution(s) (RMI) to support its implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Panj	1			

Indicator 7.3 Level of National/Local reforms and active participation of Inter-Ministeral Committees (IMC; scale 1 to 4; See Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Panj	1			

Indicator 7.4 Level of engagement in IWLEARN through participation and delivery of key products(scale 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Panj	1			

Indicator 9 Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
875.00	0.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
DDT	475.00			
Technical endosulfan and its related isomers	400.00			

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.3 Hydrochlorofluorocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

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Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
2			

Indicator 9.6 Quantity of POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	120,000			
Male	100,000			
Total	220000	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Indicator 1: Approximately 1,095,000 ha in Afghanistan (Wakhan National Park), approx 2,649,786 ha in Tajikistan based on discussions with lead Government agencies. The latter include specifically the Ramsar listed wetland Beshai Palangon (Tigrovaya Balka) reserve (49,786 ha) and the glacier dominated Tajik National Park (2.6 million ha) in the headwaters. Indicator 3: Approximately 600 ha in Afghanistan and 500 ha in Tajikistan based on discussions with lead Government agencies. Indicator 4: Approximately 20,000 ha in Afghanistan and 5,000 ha in Tajikistan based on discussions with lead Government agencies. Indicator 7: Panj river basin Indicator 9: This project targets the reduction of 475 tons annually of DDT and 400 tons annually of Lindane and Endosulfane, which will reduce the pollution of surface and groundwater. The project targets a reduction of these and other POPs of at least 8% in the Panj basin, which converts to approximately 875 tons annually (based on estimates from both countries NIP's of around 7,600 tons in Kathlon Province and Gorno-Badakhshan Province, Tajikistan, and around 1,900 tons in Badakhshan, Afghanistan). Indicator 11: Direct beneficiaries identified as households directly benefiting from improved flood management, reduced flood risk, improved drought mitigation, and reduced drought impact. The estimate includes also farmers that will benefit from improved agricultural practices.

Part II. Project Justification

1a. Project Description

1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

The Panj River (aka Pyanj River) sub-basin defines large parts of the border between Tajikistan and Afghanistan. The Panj River is 1,125 km long with an average flow 1,000 m³ per second, and the river basin territory covers an area of ca. 114,000 km². The Panj River and Vakhsh River constitute the upper basins of the larger Amu Darya River Basin, which is one of the major tributaries leading to the Aral Sea. The Aral Sea has almost disappeared after decades of increasing water consumption in large cotton fields by riparian countries (e.g. Uzbekistan, Turkmenistan, and Tajikistan). Recent changes have further increased pressures on what is left of the Aral Sea as an increasing number of hydropower and irrigation projects have been realised. These economic developments in the Aral basin coincide with increasing population growth (e.g. Uzbekistan), recent economic development and climate change. In particular, temperature changes have started affecting the cryosphere of the headwaters located in the Panj River basin (Hagg et al. 2013). These developments change water flow during the year as dry season flows decline, which amplifies drought and flood risks.

From a systems perspective, the combination of climate change and economic development (e.g. agriculture, hydropower) cause water flow alterations that have undermined efforts to preserve the northern and southern sections of the Aral Sea to date. This project will make essential contributions to reverse this trend. Currently, Afghanistan and Tajikistan are designing independent basin development and water utilisation plans. Without coordinating these planning and monitoring efforts water uses will follow the economic paradigm without considering transboundary impacts, environmental flows and the downstream requirements of the remaining parts of the Aral Sea.

Additional pressures are linked to declining water quality, largely due to agricultural activities. Considering that both countries plan to increase their investment in hydropower, water quality and quantity challenges are likely to further increase. Ten (10) hydropower projects are planned for the Panj River basin, of which eight (8) are located on the Afghan tributaries, the Kokcha and the Kunduz Rivers.

Climate change

Global climate change has increased temperatures in the Panj River basin, and is driving marked shifts in rainfall and snow melt. According to the available data, during the last decades average temperature in Afghanistan and Tajikistan increased by 0.7°C – 1.9°C, and approximately one thousand small glaciers have melted (Kayumov 2010; Borisova 2012). Since the 1930s, the area of the glaciers has decreased by approximately one third (Borisova 2012). Considering that the main source of water of the Tajikistan's rivers are glaciers, in the mid and long term this will reduce water flow of the Panj and other regional rivers. IPCC reports anticipate that by 2050 temperatures in the Panj River basin are likely to increase by another 1.8°C – 2.9°C. Consequently, it is anticipated that glacier volume will further decline, run-off will substantially increase, as will the frequency and magnitude of droughts and floods (Pritchard 2019).

These climate trajectories coincide with substantial investments in agriculture and hydropower, which results in amplified exposure and substantially rising risks. Climate change will have a negative impact on water resources management, especially on water provision in irrigated agriculture and there is a need to revise crop water requirement estimations and /or adjust cropping systems and agricultural lands to more drought-resistant, less water demanding crops.

Drought and Flood risks

Climate change has affected temperatures in the upper Panj cryosphere and, thereby, snow melt dynamics. Consequently, spring rain coincides with increasing flow contributions from earlier and magnified snow melt, which causes a surge of flood risks in the Panj River basin. Concurrently, the probability of drought events increases rapidly as annual snow melt contributions cease earlier, extending the dry season. Considering rapid population growth and increasing investment at all scales (from household to province), risks and vulnerabilities have increased substantially. In particular, droughts are predicted to become a systemic threat to ecosystems and communities as sub-alpine and alpine areas undergo a transformational change, altering water management conditions in the long term (Pritchard 2017; 2019).

In many transboundary contexts, countries have responded to such increasing risks by implementing strategies that amplify the pressure on the neighboring country. The joint development of drought and flood risk mitigation strategies is likely to lead to more resilient ecosystems and communities and reduce conflict potential. Ultimately, it will be a critical step towards the sustainable development of the wider Aral Sea basin.

Chemicals & Waste

In Tajikistan, pesticides have been a concern since the Soviet era when numerous major pesticide storage facilities were constructed. An estimated 372 of these storage facilities still exist, of which 90 per cent are in very poor or sub-standard condition (UNDESA, Stockholm Convention, and UNEP 2020). As these storage facilities are not guarded, incentives for illegal pesticide trade persist. While the exact locations of many pesticide stockpiles and contaminated sites is unknown and/or poorly documented, there are main disposal sites for pesticides in the Panj sub-basin, namely the Vahshski site in the Southern Khatlon region, which contains 7,000 tons of banned or obsolete pesticides on 12 hectares of land. Thousands of tons of DDT are located on the Tajik side of the Panj sub-basin (UNDESA, Stockholm Convention, and UNEP 2020). Increasing scarcity of agricultural chemicals in Tajikistan has led to a reported increase in illegal trade of old stocks of pesticides from storage facilities and disposal sites, often traded as 'Dust' (UNDESA, Stockholm Convention, and UNEP 2020). The illegal trade of pesticides is not limited to DDT but includes a range of other agrochemicals banned under the Stockholm Convention on POPs, including lindane (White 2013).

Consequently, hazardous and banned agrochemicals continue to be applied, further accumulating in soils and in groundwater and contributing to elevated pollution of surface water. The insecticide DDT and its derivatives affects humans through drinking water and through food, particularly fish (DeGregori and Rogers, n.d.; Beckvar, Dillon, and Read 2005). Run-off and condensation water from the sites have caused the poisoning and deaths of cattle in neighbouring villages (UNDESA, Stockholm Convention, and UNEP 2020). Considering that the majority of communities in the Panj Sub-basin face regular and frequent water shortages (Zonn et al. 2018; Mukhabbatov, Zhiltsov, and Markova 2020), levels of exposure and vulnerability are very high. According to the World Health Organization, recent studies have shown that breastmilk of Tajik mothers contains four times the safe level of DDT (Ulugov, Bobritskaya, and Sinitsky 2018). DDT has been banned under the Stockholm Convention on Persistent Organic Pollutants. However, illegal trade and application of DDT is widespread in the Panj sub-basin, particularly in cotton fields within Tajikistan (Barron et al. 2017).

While DDT is not considered a major issue in Afghanistan, lindane and endosulfane are serious POP concerns (Government of the Islamic Republic of Afghanistan 2017). Equally, across the Panj sub-basin, dioxins and furans from incineration of waste is another growing problem (Government of the Islamic Republic of Afghanistan 2017). Dioxins enter the food chain and accumulate in fish, causing serious human health problems (Fries 1995).

Decades of mining have further exacerbated water pollution, in particular the extraction and processing of uranium, gold, and mercury (Skipperud and Salbu 2011). In 2006, studies revealed high levels of metals and radionuclides in the Panj and in the wider Aral Sea river basin (Skipperud and Salbu 2011). Predicted increases in frequency and magnitude of floods is likely to worsen water pollution caused by mining.

Current challenges related to chemical use in agriculture are likely to be exacerbated by climate change as climate variability is predicted to increase and thereby shift incentives further towards increasing application levels of agrochemicals in response to increasing frequency and magnitude of floods and droughts in the Panj River basin (Koleva, Schneider, and Tol 2009; Delcour, Spanoghe, and Uyttendaele 2015).

Water quality

Agricultural expansion is also driving water and land use change in Tajikistan. Almost 80% of the agricultural output is produced in irrigated areas. Particularly Khatlon Province which has seen substantial investments in irrigated cotton, vegetables and wheat. Extreme levels of agrochemicals (including DDT) in the cultivation of cotton have caused a deterioration in water quality and poor condition of drainage infrastructure increasing soil salinity. The focus on cotton as a cash crop has replaced food crops, contributing to very high levels of food insecurity and nutritional deficiencies.

Ecosystems, biodiversity and areas of conservation importance

The western flank of the Wakhan corridor, which is an old trading route connecting Afghanistan, Tajikistan, and China along the Pamir Mountains, extends into Badakhshan with important grasslands, wetlands, glaciers and permanent snow, including the Karakoram-West Tibetan Plateau alpine steppe. Recently, the Wakhan corridor was declared a national park by the government of Afghanistan. The Pamir Mountains and the Kuh-e Safed Khers are critical for runoff, which is partly based on snow melt in spring. The alpine and sub-alpine region include important wetlands, including the Zar Kol and the Chapmaptin mountain lakes.

Most of the lowlands relevant for agricultural activities are grassland, savannah, shrublands and open wood lands. Tugai forest is the characteristic habitat of the Panj floodway and an important and characteristic wetland ecosystem type in the dry lands of central Asia. Tugai remnants in Aghanistan's parts of the Panj River basin may be one of the most important repositories of wetland biodiversity in Central Asia. The lower Panj is a Ramsar listed wetland (Lower part of Pyandj River). While the Panj basin is not a biodiversity hotspot, this region is habitat for the endangered snow leopard, and the vulnerable Asiatic Black Bear and Argali Sheep. It provides also essential habitat for the critically endangered Markhor and the vulnerable Urial.

Considering the substantial and well-documented social-ecological devastation associated with the decline of the Aral Sea downstream, trade-offs at the water-food-energy-environment nexus must be more carefully considered and balanced to account for the lasting social and environmental implications of further development. These considerations need to include future climate change and the impacts this will have on temperatures, precipitation and their spatial and temporal patterns across the region. In particular, crop productivity and food security are at risk and temperature changes have already started affecting snow melt dynamics in the upper Panj cryosphere.

The proposed project will improve the capacity of both countries to implement IWRM principles and develop effective transboundary water management links. Establishing coordination mechanisms for the Panj river basin is paramount for a sustainable development, mainly involving the transboundary management of water (e.g. drought and flood management, flood, drought and avalanches forecasting and awareness), biodiversity (e.g. national park management and biodiversity corridors), and forests. Additional economic synergies could be created, e.g. for agriculture, energy and tourism. Preliminary discussions revealed

that particularly Afghanistan requires upfront investments to improve data generation and water management capacity. To enable Afghanistan to participate effectively in transboundary IWRM it is critical to improve its data generation (e.g. design, use and maintenance of stream monitoring systems, remote sensing) and water management (e.g. basin planning, water accounting) capacity.

2) The baseline scenario and any associated baseline projects

Historically, water management treaties were forged under the Soviet Union, which involved five of the six riparian countries of the Amu Darya River basin (excluding Afghanistan). This development led to the establishment of the Interstate Commission for Water Coordination in Central Asia (ICWC), involving Tajikistan, Turkmenistan, Kazakhstan, Kyrgyz Republic, and Republic of Uzbekistan. The ICWC includes a Basin Water Organisation for the Amu Darya River and one for the Syr Darya River basin. The ICWC's main mandate is to negotiate water allocations between the five countries. It is worth mentioning that there is a valid treaty between Afghanistan and ex-USSR signed in 1958 (now followed between Afghanistan and Tajikistan including Uzbekistan and Turkmenistan) concerning the regime of Soviet-Afghan state frontier. However, no water management focused agreement exists.

In Afghanistan, increasing water demand is being met with various irrigation and hydropower projects that are planned for the Panj River basin. The water needs of Afghanistan's north-eastern Province Badakhshan are driven by agricultural activities involving poppy, almonds, wheat and potatoes. Badakhshan has substantial mineral deposits (e.g. gemstones, gold) and mining activities are expected to experience exponential growth. These developments are likely to further deteriorate water quality and increase water demands in the Panj River basin.

In Badakhshan and other provinces located downstream of the Panj river sub-basin, high levels of poverty are compounded by significantly increasing number of water-induced disasters e.g. floods, droughts, landslides, land degradation and erosion, avalanches and Glacier Lake Outburst Floods (GLOF).

To date there are two relevant baseline projects that have laid important foundations for moving towards a transboundary water management plan for the Panj River basin. First, the project "Water Resources Management of the Pyanj River Basin", funded by the ADB and the Japan Fund for Poverty Reduction, created an IWRM focused process that led to a river basin management plan and an agency responsible for river basin planning. However, these efforts were limited to the Tajik parts of the Panj and not implemented as a transboundary project. A second ADB-funded project, the "Panj-Amu River Basin Sector Project" formulated a water resources development plan within the parts of the basin located in Afghanistan.

Both countries signed MoUs and Protocols relevant for the water and environment sectors:

- Memorandum of Understanding (MoU) between the National Environmental Protection Agency of the Government of the Islamic Republic of Afghanistan and the Committee for Environmental Protection under the Government of the Republic of Tajikistan on cooperation in the field of environmental protection. Signed on September 17, 2020 between Director General of National Environmental Protection Agency of the Islamic Republic of Afghanistan and Chairman of the Committee on Environmental Protection under the Government of the Republic of Tajikistan.
- Memorandum of Understanding (MoU) between Ministry of Energy and Water (now National Water Affairs Regulation Authority NWARA) of the Government of the Islamic Republic of Afghanistan and the State Agency on Hydrometeorology, Committee on Environmental Protection under the Government of the Republic of Tajikistan on exchange of hydrological data and information relating to the Panj-Amu river for the period of 2015-2017 and prospectively until 2020 signed in November 25, 2014 between General Director of Water Management of Ministry of Energy and Water of Afghanistan and Director of State Agency on Hydrometeorology of Tajikistan.
- Protocol between Ministry of Energy and Water of Islamic Republic of Afghanistan and Ministry of Melioration and Water Dams and Water Reservoir and Ministry of Agricultural and Environment of Republic of Tajikistan on cooperation in the field of water management. Signed in August 3, 2007 by HE. Alhaj

Mohammad Ismail Minister of Ministry of Energy and Water of Afghanistan, HE. Sayed Yaqoob Zada minister of Melioration and Water Reservoir of Republic of Tajikistan and HE. Krimof Abdul Wahid Deputy Minister of Ministry of Agricultural and Environment Republic of Tajikistan.

These transboundary agreements exemplify the growing willingness of both countries to commit to effective transboundary water management.

Over the past decade, multiple projects have started to assess the extent of the chemicals and waste problems in Tajikistan and Afghanistan. These projects have initiated a longer-term process for creating inventories and introducing mechanisms to improve the sound management of stockpiles and agricultural applications, including the:

- UNEP/GEF Regional Project: *“Demonstration and Scaling Up Sustainable Alternatives to DDT for the control of vector borne diseases in Southern Caucasus and Central Asia”* (Countries: Azerbaijan, Armenia, Georgia, Kyrgyzstan and Tajikistan) 2010-2015
- WB/GEF Project: *“Complete elimination of obsolete pesticides and rehabilitation of burial places”* 2011-2014
- GEF/WB Project: *“Elimination and mitigation of effects of pesticides with POPs properties”* PPG 2010

These projects have provided important information and baseline; critical barriers and thematic and geographic gaps however remain, including the need to critically:

- Assess the effectiveness of incentive mechanisms to reduce farm-level application of DDT and other POPs
- Address the lack of institutional mechanisms and capacities addressing water quality, pollution management and transboundary concerns.
- Introduce a wide range of nature based solution for pest control and pest management
- Design into investment planning and landscape decision making agroecological approaches to reduce the use of agrochemicals

These and related priorities will be further assessed and pinpointed in PIF and PPG development.

Associated Baseline Projects

Additional baseline projects identified and discussed within PIF-concept design phase and considered of relevance to the geographic and thematic gaps being targeted within this project are listed in Table 1.

Table 1: Baseline Projects

Country	Measures	Lead Executing Institutions	Project collaboration potential	Investment (US\$ million)				
				2021	2022	2023	2024	2025
Afghanistan	ADB/EU: Panj–Amu River Basin Sector Project (48042-001)	MoF	National basin planning process the proposed project can build on and inform.	10	10	5		
Afghanistan	ADB: Preparing the climate-resilient livestock value chain for the Panj–Amu River Basin Sector Project (48042-001)	MoF	Livestock adaptation process the proposed project can in	10	10	5		

n	ue chain enhancement sector project ((54012-002)	MoA	form and can receive data from.	0.2	0.2	0.2	0.2	
Afghanistan	World Bank: Afghanistan Land Administration System Project (IDA and AFG Restructuring Trust Fund)		Land planning process the proposed project can inform and can receive data from.	7	7	7	7	7
Afghanistan	World Bank: Emergency Agriculture and Food Supply project (IDA grant)		Agriculture and livelihood focused initiative the proposed project can receive data from.	33	33			
Afghanistan	World Bank: COVID-19 Emergency response and health Systems Preparedness project (IDA grant)		Health focused initiative the proposed project can receive data from and guide for future planning.	20	20	20	20	
Tajikistan	ADB/ Japan Fund for Poverty Reduction: Water Resources Management in the Pyanj River Basin (47181-002)		National basin planning process the proposed project can build on and inform.	4.3	4.3	4.3	2	
Tajikistan	River Basin Dialogues on IWRM in 4 Basins (4 meetings/year)	MEWR	National basin planning process the proposed project can build on and inform.	10.4	10.4	10.4	10.4	10.4
Tajikistan	Basin plan development review	MEWR	National basin planning process the proposed project can build on and inform.				5	5
Tajikistan	Seasonal water management planning	MEWR	National basin planning process the proposed project can build on and inform.	1	1	1	1	1
Tajikistan	Strengthen legislation and regulation for water sector	MEWR	National process the proposed project can inform by adding transboundary perspective.	2.5	2.5	2.5	2.5	2.5
Tajikistan	Financing of 4 RBOs and 4 Sub-basin RBOs	MEWR, MoF	National basin planning process the proposed project can build on and inform.	168.1	168.1	168.1	168.1	168.1
			National basin planning proc					

Tajikistan	Establishment of River Basin Council in 4 basins	MEWR	ess the proposed project can build on and inform.	31.2	31.2	31.2	31.2	31.2
Tajikistan	Strengthening of Existing WUAs and Development of new WUAs	ALRI, MEWR	National basin planning process the proposed project can build on and inform.	5	5	5	5	5
Tajikistan	Investment planning for rehabilitation of irrigation infrastructure	ALRI, MoF, MED T, MEWR	Agriculture focused initiative the proposed project can receive data from.				5	5
Tajikistan	Rehabilitation of Irrigation Infrastructure	ALRI, MEWR	Agriculture focused initiative the proposed project can receive data from and inform future planning.	3,600	3,600	3,600	3,600	3,600
Tajikistan	Rehabilitation of drinking water supply and sanitation infrastructure	MEWR, KMK, Municipalities	Proposed project can establish critical transboundary planning connections.	2,600	2,600	2,600	2,600	2,600
Tajikistan	Creation and development of Data Base and Water Information System (WIS)	MEWR, ALRI, KMK, CEP, Emergency Committee	Proposed project will contribute by establishing data sharing mechanism with Afghanistan.	3	3	3	3	3
Tajikistan	Strengthening capacities of water sector organizations and water users	MEWR, ALRI, KMK, Emergency Committee, WUAs	Proposed project can establish critical transboundary planning connections.	5	5	5	5	5
Tajikistan	Strengthening capacities of organizations for transboundary water management and support for development of regional and international cooperation on water	MEWR, MFA, CEP, ALRI	Proposed project can establish critical transboundary planning connections.	3	3	3	3	3
Tajikistan	Scientific-research works on improving efficiency in use of water resources	MEWR, CEP, ALRI, KMK, ASoT	Proposed project can integrate new studies and identify scientific research gaps.	10	10	10	10	10

3) The proposed alternative scenario with a brief description of expected outcomes and components of the project

The proposed new GEF-IW project will build on progress made in recent projects by integrating planning and water management in the two countries towards improving the bilateral coordination of water management. Once this has been achieved, it is envisaged that the cooperation between Tajikistan and Afghanistan for the Panj River could be expanded to cover the entire Amu-Darya River basin. So far, the Amu-Darya River basin planning has been dominated by the Interstate Commission for Water Coordination in Central Asia (ICWC), which excludes Afghanistan due to historical socio-political reasons.

This project aims to establish and foster effective transboundary water management between Tajikistan and Afghanistan to establish operational mechanisms to manage nexus trade-offs in the Panj River basin. The project will establish a jointly-agreed scientific evidence base considering climate change, environmental flows and development related nexus trade-offs. This step will provide a robust basis for assessing scenario-based risks and opportunities for certain development strategies under likely climate change trajectories.

Considering the existing capacity gap between both countries the proposed project will develop and apply a methodology to assess the capacity of each country to generate and analyse the data and information needed to engage successfully in transboundary IWRM. Project resources (Component 1) to build capacity in this area will be allocated on the basis of this capacity assessment. Preliminary discussions have already revealed that substantial capacity building is required in Afghanistan to enable Afghan authorities to effectively engage in transboundary water management discussions with Tajikistan. These activities will include the design, use and maintenance of river and stream monitoring systems and remote sensing technology to close data generation related gaps. Both countries' water management related capacity will be strengthened by training events in basin planning, water demand management, water accounting, water and gender, cross-sector coordination, and other topics identified during the capacity assessment.

Establishing institutional mechanisms between Tajikistan and Afghanistan is feasible given the strong cultural connections between the neighbouring provinces along the Panj River. The recent ADB investments in establishing water management agencies in both countries and developing water management and basin development plans are critical foundations for increasing the depth and breadth of transboundary water management. After successful completion of this project, these will serve as a promising platform for connecting the upper catchment with the existing institutional structures of the Amu-Darya River basin. This long-term strategy will establish the fundamental framework for sustainable water management and basin planning for the largest tributary of the Aral Sea.

The project will integrate existing national basin development plans towards transboundary water management between Tajikistan and Afghanistan based on a Transboundary Diagnostic Analysis – Strategic Action Program (TDA-SAP) process. This evidence-based planning process is recommended by the GEF IW Focal Area for “foundational” projects and aims at creating mutual trust among riparian countries by joint fact finding, facilitating the consensus on overall long-term basin vision, and assisting governments and stakeholders as they agree on the strategies and actions needed to meet mounting water management challenges from a transboundary perspective. Afghanistan and Tajikistan cannot effectively meet increasing flood risk in isolation. Also, drought related management options are likely to amplify impacts on the neighboring country if both countries do not coordinate their water management strategies.

The project will fulfill its purpose through the systematic implementation of structured participatory processes for institutional strengthening, awareness raising, promotion of broader adoption, and gender mainstreaming designed to identify the procedures, agreements, responsibilities and monitoring strategies for successful cooperation between Afghanistan and Tajikistan and the multiple sectors dependent on the transboundary waters of the Panj River basin. This will strengthen transboundary water management and basin planning capacity and lead towards the institutionalization of transboundary cooperation. The joint TDA-SAP process will consider nexus trade-offs while aiming for improving water resources management and development, irrigation systems, crop selection and cropping calendars, watershed management, agroforestry and application of agrochemicals. The overarching goal will be to establish a transboundary basin development plan that leads to more sustainable development and improved environmental outcomes.

In regards to the chemicals and waste focus, this project proposes the establishment of an effective institutional arrangement including a transboundary water management strategy for addressing water quality and other water management challenges. It will also aim to establish a joint monitoring program for water quality. Based on a comprehensive transboundary diagnostic analysis, Tajikistan and Afghanistan will develop a joint action plan to reduce pollution. Additionally, demonstration projects will be implemented to test the effectiveness of proposed actions, including nature-based solutions. Project activities include:

- Design strategies for the diversification of monoculture (e.g. cotton) to increase natural resilience to pests;
- Assessment of alternatives to agrochemicals, e.g. bio-control and natural pesticides;
- Design and contextualise agroecological approaches for sustainable agriculture to reduce pesticide application rates;
- Collect and analyse existing data and information on the deterioration of groundwater quality driven by the use of agrochemicals and contribute to/compare with FARM project;
- Improve the information on groundwater quality as available in national and global information systems such as AQUASTAT, including both biophysical data and information related to regulation, legislation, institutions and policy;
- Improve monitoring and enforcement of agrochemicals, incl. DDT;
- Improve water treatment in facilities responsible for emitting radionuclides;
- Design marketing strategies for organic agriculture.

The proposed Chemicals and Waste component of the Panj Sub-Basin project will focus on positively incentivising behaviour of farmers through a range of mechanisms - some already known to be effective from other FAO programming and other innovations that will be tested in the Panj project. All chemical and waste components of the Panj project will be coordinated with the proposed *Financing Agrichemical Reduction and Management* (FARM) programme. FARM has a global agenda and aims to reduce the use of harmful agrochemicals by supporting farmers to access finance, innovative practices, and markets. The FARM program does not specifically target Tajikistan or Afghanistan, but lessons learnt from the global program will inform the Panj River Sub-Basin initiative.

These actions will improve the resilience of communities against water related threats, including water pollution. The outcome would include the upscaling of nature-based solutions that substantially reduce the loads of agrochemicals and other pollutants in the Panj-sub-basin and the downstream Amu-Darya River and the Aral Sea. This would include a substantial reduction of DDT and other POPs. The project targets a reduction of POPs of at least 8% in the Panj sub-basin, which converts to approximately 875 tons annually (based on estimates from both countries NIP's of around 7,600 tons in Kathlon, Tajikistan, and around 1,900 tons in Badakhshan, Afghanistan). In the long-term human and environmental health is expected to improve over time as accumulated levels of pollutants decline.

The intervention logic is outlined in Figure 1 and the Theory of Change is provided separately.

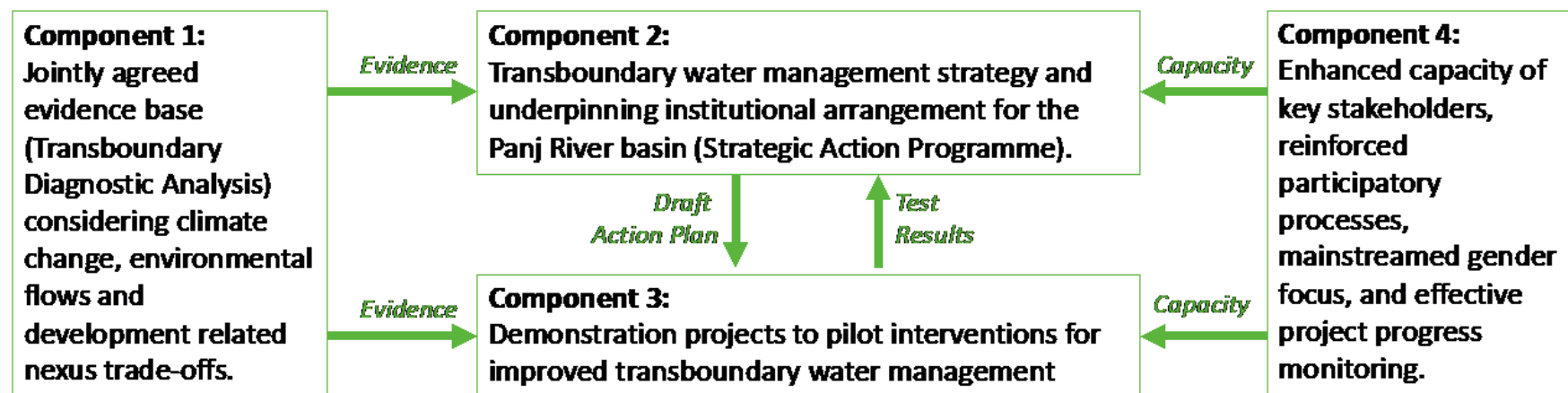


Figure 1: Intervention Logic

Component 1: Jointly agreed evidence base (Transboundary Diagnostic Analysis) considering climate change, environmental flows, and development related nexus trade-offs..

Outcome 1.1: Countries' improved ability to engage successfully in transboundary IWRM.

Output 1.1.1: Countries' data and information generation capacity for effective IWRM of the Panj River basin established

The project will develop and apply a methodology to assess the capacity of each country to generate and analyse the data and information needed to engage successfully in transboundary IWRM (e.g. design, use and maintenance of stream monitoring systems, glacier monitoring, innovative remote sensing, water quality monitoring). Project resources to build capacity in this area will be allocated on the basis of this capacity assessment.

Output 1.1.2: Countries' management capacity strengthened to support transboundary IWRM in the Panj River.

The project will also develop and apply a methodology to assess the capacity of each country to implement IWRM principles and mechanisms, including basin planning, cross-sector coordination, water accounting, water demand management, and other relevant IWRM topics. Project resources to build capacity in this area will be allocated on the basis of this capacity assessment.

Outcome 1.2: Consensus among countries on key transboundary and national concerns affecting the transboundary Panj River basin, reached through joint fact finding, informs a transboundary water management strategy.

Output 1.2.1: Assessment of current state and projected trends of freshwater resources (incl. groundwater and cryosphere) and of related ecosystems and livelihoods.

The transboundary diagnostic analysis will be conducted by the National Execution Teams (NET) for the entire Panj River basin. The JTCs (see Output 2.1) will have an oversight function. The assessment will include a wide range of water management related dimensions, including:

- the current state and predicted future trajectory of water quantity and water quality changes (surface and groundwater);
- the state and predicted change of water dependent ecosystems (wetlands, lakes, humid zones, inland fisheries);
- current and future drought and flood risks and likely impacts on ecosystems and communities in the various zones of the Panj River basin;
- current and expected water quality changes considering point and non-point pollution sources and hotspots from agricultural production (including planned agricultural extension) and mining (incl. mining deposit based projections);
- current and expected future changes in poverty, food security, gender equality, and governance;
- recent and predicted climate change and implications for flood and drought risks;
- current status and expected future changes in biodiversity for the various zones of the Panj River basin;
- analysis of competing water-food-energy-ecosystems nexus dimensions.

Output 1.2.2: Assessment of the potential for nature-based solutions in the Panj River basin's existing or planned infrastructure investments.

The international team will identify a portfolio of community and nature-based solutions that could effectively meet the water quantity and water quality related challenges in the Panj River basin. These solutions will be assessed with the national teams and the JTCs. Shortlisted solutions will be assessed for the context of selected communities in the Panj River basin. These solutions will build on a broader social-ecological system understanding of mounting water management challenges (e.g. drought management) and their underpinning drivers. Intervention points will be identified and subsequently assessed considering a wide range of socio-economic, ecological and hydrological indicators.

Output 1.2.3: Agreed upon Transboundary Diagnostic Analysis (TDA) of the basin freshwater resources focusing on quantity and quality issues, ecosystem health and related livelihoods, and including consideration of climate change impacts on snow melt dynamics, extreme flood and drought events, water resources governance and gender equality aspects.

The TDA process will be finalized by bringing together Outputs 1.1 and 1.2. This step will emphasize increasing climate variability from the transboundary perspective of Afghanistan and Tajikistan and recommend intervention points based on social-ecological processes that enhance environmental degradation and drought and flood risks. The TDA will be conducted according to the methodology developed for the IW Focal Area, through a systematic participatory and consultation process involving all stakeholders, ranging from local communities to major private sector actors. Socio-economic analysis and governance aspects will be central to the TDA process. The multi-tiered participatory process will lead to an evidence based that is jointly endorsed by Afghanistan and Tajikistan to inform the strategic action planning process of Component 2.

Component 2: Transboundary water management strategy and action program and underpinning institutional arrangement for the Panj River basin.

Outcome 2: Improved water security, community resilience, and environmental sustainability through the implementation of evidence-based action plans.

Output 2.1: Establishment of Joint Technical Committees (JTC) for major water management issues.

Joint Technical Committees (JTCs) will be established for the key water management challenges of the transboundary Panj River basin. JTC foci will include drought management, flood risk management, land management, and water quality monitoring. The JTCs will be incorporated into the project implementation and will be responsible for the execution of many of the project activities and will cover the following topics:

- (i) Assessments, TDA, water-food-energy-ecosystems nexus, visioning process;

- (ii) Monitoring, information exchanges, indicators and early warning systems;
- (iii) Surface and groundwater governance.

The JTCs will agree to joint terms of reference and will have a balanced gender composition.

Output 2.2: A jointly developed and endorsed water security and community resilience vision for the Panj River basin.

The Vision - developed by JTCs - will have a 20-year time horizon and will cover the entire transboundary Panj River basin. It will include agreed long-term targets for environmental sustainability.

Output 2.3: Strategic Action Program (SAP) with horizon of 5-10 years, consistent with the TDA findings and the Shared Vision and including revised agricultural development and water infrastructure investment plans if required endorsed at ministerial level in both countries.

A SAP with a time horizon of 5-10 years, consistent with the shared vision addressing basin governance and main issues of transboundary concern, including climatic variability and change, through legal, policy, institutional reforms and investments. The SAPs will be formulated by the JTCs and on the basis of the results of the TDA, of stakeholder consultations, of the experience gained with pilot projects. They will be reviewed/approved by the project's Steering Committee and endorsed at ministerial level. Focus will be on cooperative actions related, amongst others, to drought management, flood risks, water quality, and the integrity of freshwater/coastal ecosystem services and fisheries.

Output 2.4: Preparatory actions implemented for countries to develop National Action Plans (NAP) for the Panj River basin translating regional priorities (based on SAP endorsement) into national government and private sector actions.

The SAP will be adapted to National Action Plans (NAPs) for the Panj River basin and thereby redirect national planning priorities toward achieving the joint vision. NAPs will be further informed by the lessons learnt from the demonstration projects. This will include the review and revision of existing plans for agricultural development and water management infrastructure based on TDA-SAP process outcomes and, consequently consider social-ecological dynamics of the Panj River basin. Emerging investment plans will endorse actions towards improved water management, environmental sustainability, and improved agricultural productivity.

Output 2.5: Foundational agreement endorsed to establish Bilateral Basin Coordination Committee (BBCC).

Afghanistan and Tajikistan will agree to establish a Bilateral Basin Coordination Committee (BBCC) for the Panj River and embedding its mandate in the national legislative framework.

Component 3: Demonstration projects to pilot interventions for improved transboundary water management.

Outcome 3: Countries agree on testing joint water management and climate change actions for effective drought and flood risk mitigation, sustainable water and land management, policies, practices and technologies, and share results and experiences.

Output 3.1: Transboundary data-sharing mechanisms to inform effective drought and flood risk management.

Output 3.2: Implementation of nature-based solutions to support drought and flood management, sustainable water and land management, policies, private sector investments, practices and technologies.

Output 3.3: Design and field testing of harmonized water monitoring networks and protocols (surface and groundwater)..

A series of demonstration projects will be developed by the JTCs based on TDA recommendations and approved by the Steering Committee. The number of pilots will be limited to ensure feasibility and long-term sustainability. The work will be executed to the extent possible by joint teams, and the results and experiences gained through the pilots will be systematically shared between the two countries, and beyond.

Component 4: Enhanced capacity of key stakeholders, reinforced participatory processes, mainstreamed gender equality focus, and effective project progress monitoring.

Outcome 4: Achievement of project outcomes facilitated through effective mechanisms for improved stakeholder consultation, gender mainstreaming, dissemination, coordination and monitoring.

Output 4.1: Capacity building in drought and flood management and related aspects of transboundary water management and basin planning.

The training component of the project will be aimed at land/water administrators and deal with key aspects of transboundary waters management, including:

- Data collection, analysis and management using modern ICTs;
- Development of scenarios of water futures with a focus on climate variability and change (for example using the IIASA approach to interactive scenario building);
- Drought and flood management;
- S2S management and Integrated Water Resources Management;
- Water quality monitoring;
- Gender-transformative natural resources management;
- Principles, and experiences gained globally from the application of key directives, conventions and guidelines, including: UNECE Water Convention, UN Non-Navigational Uses Convention, and UNGA Resolution on the Law of Transboundary Aquifers.

Output 4.2: Water and Gender Action Plans and indicators, based on results of the TDA (Component 1), adopted by relevant authorities in both countries

These plans and indicators will facilitate the mainstreaming of gender in water management of both countries

Output 4.3: Annual stocktaking and awareness raising meetings with relevant stakeholders (e.g. local, national and regional meetings)

These events will present the Project's progress to a broad range of stakeholders at the national, regional and global levels. Stocktaking Meetings will be held annually with the participation of all project stakeholders, implementing and executing agencies and bodies, the GEF Secretariat, development assistance providers, ongoing complementary projects, MEAs focal points. Innovative means of communicating with ethnic or marginalized communities will be explored and implemented as appropriate.

Output 4.4: Periodic events for the coordination with other ongoing initiatives in the Panj River basin and the wider Amu Darya River basin whenever required.

These events will ensure effective coordination with other ongoing and planned initiatives in the Panj River basin. It will also help developing a strategic approach that holistically combines nature-based and hard infrastructure solutions.

Output 4.5: Full participation to GEF IW LEARN activities (1% of project budget), including creation of a project website, and preparation of experience notes

Collaboration will involve the creation of project web site following IW LEARN standards, the publication of Experience Notes, and the full participation to GEF IW conferences and other IW LEARN activities. 1% of the project GEF budget will be allocated to this output.

4) Alignment with GEF focal area and/or Impact Program strategies

The project is fully in line with the International Waters Programming Directions for GEF 7, Objective 3: Enhance water security in freshwater ecosystems.

The GEF7 IW Strategy states that "... IW support in freshwater basins will focus on three areas of strategic action: 1) advance information exchange and early warning; 2) enhance regional and national cooperation on shared freshwater surface and groundwater basins; and, 3) invest in water, food, energy and environmental security". All three areas are covered in the proposed project.

The GEF7 IW Strategy further supports "investments in a small number of fragile and/or conflict affected countries in transboundary basins both in foundational processes and SAP implementation ... to support actions by which decreasing natural resource pressures and water stress can contribute to decreasing fragility and allowing fragile areas and/or countries to stabilize and fully engage in regional processes, hence contributing to preventing larger regional conflict." The proposed project supports Afghanistan by supporting data generation and management towards supporting improved water management and the country's ability to engage successfully in transboundary IWRM.

Moreover, the project adopts the Source to Sea approach promoted by the GEF STAP, and focuses on a basin the TWAP RB risk assessment assigns the highest environmental water stress (5/5). The Panj is one of the main tributaries of the Aral Sea, which is one of the world's worst environmental disasters. The lake declined to 10% of its original size due to extensive irrigation expansions. Consequently, its prosperous fishing industry was essentially destroyed, with resulting unemployment and economic hardships. Agricultural intensification caused also heavy pollution of the sea and its tributaries.

The GEF CW strategy targets the reduction of "agricultural chemicals that are listed as persistent organic pollutants under the Stockholm Convention ... Where the chemicals are in use, investments will be made to introduce alternatives. ... The program will target the reduction of Endosulphan, Lindane and highly/severely hazardous pesticides that enter the global food supply chain as well as address end of life, waste and obsolete POPs ... This program will also address restriction of DDT production and use..." The proposed project will support these goals and reduce the application and management of agrochemicals in Tajikistan and Afghanistan and, thereby, substantially reduce the level of POPs in the Panj River basin and the downstream environment of the Amu Darya basin and the Aral Sea.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

Increasing climate variability and snow melt dynamics are creating challenges that Afghanistan and Tajikistan cannot solve unilaterally. Instead, transboundary strategies and action plans are required that address mounting challenges from a basin perspective and align national planning accordingly. Drought and flood risk management and water quality improvements are at the forefront of developments challenging ecosystems and communities throughout the Panj River basin.

Recent projects and mounting evidence have facilitated a shift towards embracing transboundary approaches, which the GEF IW funding can build on. This transboundary dimension will require shared recognition of the system boundaries (in line with the ecosystem approach), the establishment of bilateral mechanisms for information sharing and cooperation on common issues such as climatic hazards mitigation, and the enhancement of regional awareness and stakeholder involvement, all of which is incremental with respect to the "baseline".

Neither Afghanistan or Tajikistan have operationalized mechanisms that effectively improve community or ecosystem resilience to climate variability and deteriorating water quality. Without the facilitation of the GEF, the countries will continue to design and implement water management improvements from their individual country perspective and, thereby, amplifying drought and flood related risks for the neighboring country. The GEF investment will introduce effective mechanisms to sustainably coordinate water resources exploitation/development policies by systematically considering the advancements in scientific understanding of the characteristics of the transboundary system and the transboundary implications of their interconnected and shared nature. This will mitigate exacerbating conflicts among users, convalesce water security, and contribute to the integrity of dependent ecosystems. Without the GEF project, transboundary cooperation will remain insufficient for tackling basin challenges and achieving the SDGs. Therefore, the regional benefits that the project will accrue will be derived from the improved protection and sustainability of significant transboundary freshwater resources and related ecosystems, bringing about improvements in the overall stability and water security in the region.

6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

The project will create global environmental benefits in multiple ways, first by fostering cooperation among countries sharing transboundary water systems – the overarching goal of the International Waters focal area – and fostering water and environmental security. This will be achieved by putting mechanisms and processes in place that reverse the present trends in overexploiting natural resources. These mechanisms will integrate more effective nature and community-based approaches in basin planning and introduce more sustainable water and land management practices. These activities will reconcile cross-sector and transboundary water conflicts across the water-food-energy-ecosystems nexus with focus on improved flood and drought management, pollution control, and irrigation. This project will introduce coordinated mitigation mechanisms for climatic hazards and halt the degradation of habitats such as grasslands, wetlands, and forests. The project targets the improvement of conservation management effectiveness of 3,744,786 hectares of terrestrial protected areas, and the restoration of 1,100 hectares of degraded agricultural land. Additionally, the project targets improving agricultural practices for 25,000 hectares.

The project will support the achievement of global benefits in other GEF focal areas, through the protection and conservation of freshwater biodiversity and the mainstreaming of resilience to climate variability and change into water resources and land management.

This project contributes towards the following global environment benefits (GEBs):

- Improvement of sustainable water management in production systems (agriculture, wetlands, and forest landscapes in the transboundary Panj River basin shared by Afghanistan and Tajikistan).
- Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services.
- Restoration of environmental flows in the Panj River and, thereby, improved contributions to the Aral Sea.
- Enhancement of capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks.
- Reduced pollution load in international waters from nutrient enrichment and other land-based activities;
- Reduced vulnerability to climate variability and climate-related risks, and increased ecosystem resilience.
- Reducing use and releases of Persistent Organic Pollutants.

- Reduced risks on human health and the environment through sound management of chemicals and waste of global concern.

From a global biodiversity perspective, water and land degradation in the Panj River basin contributed to the collapse of the Aral Sea and its ecosystem services. Two Ramsar listed wetlands locate on the Tajik side of the Panj River basin, the Zorkul Lake and the lower Panj. Afghanistan has not yet signed the Ramsar convention.

Finally, the project will support the achievement of globally established SDG Targets 5.5 (women empowerment); 6.3, 6.5 and 6.6 (reduce water pollution, foster transboundary cooperation, protect aquatic ecosystems); 13.1 (strengthen climate resilience); 15.1, 15.5 (restoration of freshwater ecosystems, halt loss of biodiversity)

7) innovation, sustainability and potential for scaling up.

The proposed project will implement the International Waters focal area strategy (the TDA – SAP process, which has proven effective in many GEF “foundational” projects) for the transboundary Panj River basin to establish a transboundary water management strategy. The Transboundary Diagnostic Analysis (TDA) that will provide a sufficiently robust evidence base for the subsequent strategic action planning will embrace a comprehensive cross sector approach analyzing freshwater resources considering all relevant perspectives of utilization and interactions under different future climatic scenarios. This approach is a response to the priorities set forth by the GEF-7 IW Strategy on overall water security.

Transboundary water management has not yet been fully implemented in Afghanistan despite its four major transboundary river basins. Implementing IWRM principles in a post-war situation by combining capacity building with the well-tested TDA-SAP process is also new to Afghanistan and the wider region. Transboundary water management has been established between the Soviet states along the Amu Darya, which excluded Afghanistan. The existing Amu Darya basin commission ICWC is mainly focused on water allocations for agricultural production and is widely perceived as ineffective to establish a sustainable development agenda. Consequently, the focus on the Panj River as the main headwaters of the Amu Darya is an innovative approach.

The transboundary process to design and implement solutions that respond to the sharply increasing climate variability is also new to the region and will establish effective solutions and action plans for both countries. Embedding the participatory process in a nexus-focused assessment that aims to mitigate cross-sector trade-offs is also an innovative perspective for the region. This will make substantial contributions to the resilience of communities and ecosystems in the Panj river basin.

The project design and the TDA-based strategic actions (e.g. pilots) can be upscaled once transboundary water management has been institutionalized for Tajikistan and Afghanistan. The upscaling could target downstream countries of the Amu Darya and also include in a parallel approach the Syr Darya River (as the second large tributary of the Aral Sea). The specific focus on improving Afghanistan’s capacity to manage transboundary waters can also be upscaled to the improved management of its three other transboundary river basins, the Harirud-Murghab, Kabul and Amu River Basins.

1b. Project Map and Coordinates

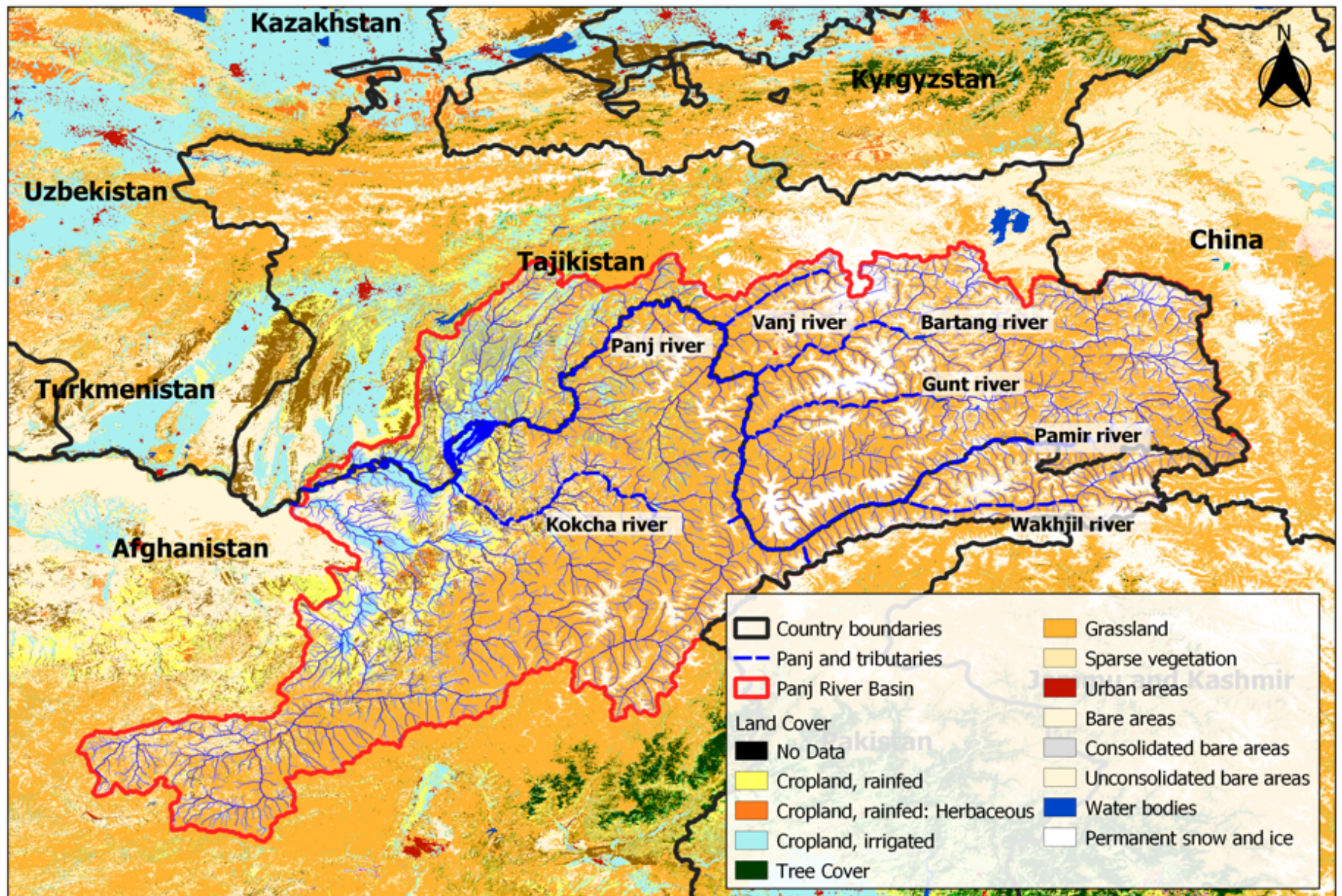
Please provide geo-referenced information and map where the project interventions will take place.

The project will focus on the Panj River basin, which is shared by Afghanistan and Tajikistan.

Coordinates are

Northern boundary: 38°51'41.1"N à Southern boundary: 36°41'30.0"N

Western boundary: 68°53'25.9"E à Eastern boundary: 75°06'27.7"E





2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

As part of the PIF formulation, country consultations took place between July and October 2020. The PIF development was mainly driven by Government agencies from both countries. However, a few CSOs have also contributed to the design of the PIF, the Afghanistan Civil Society Forum - Organization (ACSF-O), the Afghanistan Engineers Association (AEA), and the Tajik NGO NOOSFERA.

In Afghanistan the following agencies were consulted in Afghanistan:

- National Water Affairs Regulation Authority NWARA
- Meetings and discussions with Director General of NWARA
- Meetings and discussions with Deputy Director General of NWARA
- Meetings, discussions and official feedback from Director of Transboundary Water Unit NWARA
- Meetings, discussions and official feedback from Director General of Water Resources Department of NWARA General Directorate
- Discussions with Panj-Amu River Basin General Directorate NWARA relevant staff
- Discussion with regional staff of Irrigation Restoration Development Project IRDP (WB funded Project with FAO TA) based in Kunduz covering Panj River Sub-Basin
- Ministry of Foreign Ministry MoFA
- Meeting and official feedback from Director of Border Affairs and Transboundary Water Department MoFA
- National Environment Protection Authority NEPA
- Meeting and official feedback from Deputy Director General of Border Affairs and Transboundary Water Directorate MoFA
- Discussion with staff of relevant departments of NEPA
- Ministry of Agriculture, Irrigation and Livestock MAIL
- Discussion with Takhar Provincial Director of MAIL
- Food and Agriculture Organization of the United Nations FAO
- Discussion with the Manager of FAO's Mazar regional office
- Discussion with individual experts of Agriculture and Integrated Pest Management
- United Nation Environment Programme UNEP
- Discussion with Climate Change Specialist Afghanistan Country Programme Crisis Management Branch
- Panj-Amu River Basin Sector Project, Sheladia Associates, INC.

- Meeting and discussion with TL of the Panj-Amu River Basin Sector Project ADB funded Project

NWARA, NEPA, MoFA, and MAIL will remain major stakeholders during the PPG phase and the project execution phase. However, the PPG phase will allow engaging with these Ministries' provincial offices in Badakhshan, Takhar, Kunduz, and Baghlan. A range of additional Government and Non-Government stakeholders will be engaged during the PPG phase in form of meetings or workshops.

Institution/Organization	Engagement
National Water Affairs Regulation Authority NWARA	Primary stakeholders and project executing agency.
NWARA provincial offices for Badakhshan, Takhar, Kunduz, and Baghlan	Will provide technical expertise to the project final design and during project implementation taking the lead on particular project activities. Province offices will provide on-the-ground support to project design and implementation. Will also be periodically engaged based on stakeholder engagement plan (e.g. workshops and meetings).
National Environmental Protection Agency NEPA and its provincial offices for Badakhshan, Takhar, Kunduz, and Baghlan	
Ministry of Agriculture, Irrigation and Livestock MAIL and its provincial offices for Badakhshan, Takhar, Kunduz, and Baghlan	
Ministry of Rural Rehabilitation and Development MRRD and its provincial offices for Badakhshan, Takhar, Kunduz, and Baghlan	Will support the transboundary dialogue and facilitate the cross-sector discussion.
Ministry of Foreign Affairs MoFA	
Ministry of Finance MoF	
Ministry of Mines and Petroleum MoMP and its provincial offices for Badakhshan, Takhar, Kunduz, and Baghlan	
Ministry of Women Affairs MoWA	
Ministry of Economy MoE	
Afghanistan Meteorological Authority AMA	
National Statistics and Information Authority NSIA	
Afghanistan Civil Society ACS	
Union of Afghanistan Engineers & Architects Association	

Union of Afghanistan Engineers & Architects Association	Will provide technical expertise to the project final design and during project implementation, taking the lead on particular project activities.
Afghanistan Engineers' Association AEA	
The district's governor offices in Badakhshan, Takhar, Kunduz, and Baghlan	
Panj – Amu River Basin Council PARBC	
Panj River Sub Basin Council PRSBC	
Kokcha River Sub Basin Council KRSBC	
Taluqan River Sub Basin Council TRSBC	
Lower Kunduz River Sub Basin Council LKRSBC	
Upper Kunduz River Sub Basin Council UKRSBC	
Local Water Management Institution (<i>Mirab, Kokbashi and Chakbahi</i>) in the target provinces	
District Development Association (DDA) in the target provinces	Will provide on-the-ground support to project design and implementation. Will also be periodically engaged based on stakeholder engagement plan (e.g. workshops and stocktaking meetings)
Community Development Council (CDC) in the target provinces	
Urban and Rural Municipalities (<i>Sharwali</i>) in the target provinces	
Village Councils (<i>Shura e Mahli</i>) in the target provinces	
Community Based Organizations (CBO's) in the target provinces	
Water User Associations and Irrigation Associations in the target provinces	
Artisanal Miners in the target provinces	
Fishermen in the target provinces	Will be invited to the annual Stocktaking Meetings
UNAMA offices in Badakhshan, Takhar, Kunduz, and Baghlan	
Aga Khan foundation	
Concern Afghanistan	
Merci Corps	
ACTED	

The following agencies were consulted in Tajikistan:

- Committee of Environmental Protection under the Government of Tajikistan
 - o Meetings and discussions with the Chairman of the Committee of Environmental Protection, GEF OFP
 - o Meetings and discussions with the Head of Projects Implementation Group
- Agency on Hydrometeorology
 - o Meetings and discussions with the director of the Agency on Hydrometeorology, UNFCCC Focal Point
 - o Meetings and discussions with the deputy director of the Agency on Hydrometeorology
- National Centre for implementation of Stockholm Convention
 - o Head of National Centre
- Ministry of Energy and Water Resources of Tajikistan
 - o Meetings and discussions with deputy Minister of Energy and Water Resources
 - o Meetings and discussions with Head of the Department of Water and Energy Policy, Development of Science and Technologies
- Pyanj River Basin Organization
 - o Discussions with the head of Pyanj River Basin Organization
- Food and Agriculture Organization of the United Nations FAO
 - o Discussion with the FAO Representative in Tajikistan
 - o Discussion with the national project manager for POPs project
- United Nation Development Programme UNDP
 - o Discussions with the Team Leader on Climate Change, Energy Environment and DRR
 - o Meetings and discussions with the Program Manager of Energy and Environment

Additional meetings were held with individual water, environment and social experts from the Panj River Sub-basin.

Institution/Organization	Engagement
Committee of Environmental Protection under Government of Tajikistan	Primary stakeholders and project executing agency.
The Agency on Hydrometeorology	Will provide technical expertise to the project final design and during project implementation taking the lead on particular project activities.
Ministry of Energy and Water Resources of Tajikistan	
The Agency on Irrigation and Land Reclamation under the Government of Tajikistan	
Pyanj River Basin Organization	
National Centre for implementation of Stockholm Convention	
Province government agencies in Panj river basin	Will provide on-the-ground support to project design and implementation. Will also be periodically engaged based on stakeholder engagement plan (e.g. workshops and stocktaking meetings)
NGO "NOOSFERA"	
United Nation Development Programme UNDP	Will be invited to the annual Stocktaking Meetings
Asian Development Bank ADB	

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

The project will be aligned with the GEFs and FAOs Policies on Gender Equality, the FAO Regional Gender Strategy and Action Plan 2017-2019 for Asia and the Pacific, and the GEF Gender Implementation Strategy. The project is also in line with SDG 5 on Gender Equality, and the empowerment of women and girls, and it will therefore put efforts to improve the participation of women in decision-making, particularly in drought and flood management, water quality monitoring, and in the design and implementation of effective transboundary institutions.

The project will develop a Gender Action Plan (GAP) during the PPG phase to ensure that gender considerations are being considered during project formulation through a gender-responsive approach, and through specific activities directed to strengthen women's participation in decision-making.

During early project implementation, gender actions will be consolidated into a Gender Strategy for the transboundary Panj River basin shared by Afghanistan and Tajikistan, that will include, among others, the following interventions:

- Capacity development to national stakeholders on drought and flood management, water quality monitoring, and basin planning.
- Creation of a system with Gender Focal points at national and regional levels to share information related to gender issues in drought and flood management and related livelihood adaptation.
- Conduct gender analysis in both project countries based on the collection of sex-disaggregated data to have an overall assessment of women's roles.
- Design specific activities targeted to women to ensure they benefit from the project and to improve their participation in decision-making.

Setting up a gender responsive M&E system, with gender sensitive indicators.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

Climate change is putting substantial pressure on agriculture to adapt as rainfall water flow will continue to experience increasing changes, partly due to shifting rainfall patterns and partly due to changing snow melt dynamics. For decades, the largest cash crop has been cotton and the project will engage with large cotton producers to facilitate their adaptation planning. Also, producers of other large crops will be engaged to establish a productive public-private partnership towards more sustainable water management in the Panj River basin. This engagement will specifically target the conversion of SAP priorities into adjusted private sector investments to support national action planning. Considering the project aiming for flood risk mitigation, improved flood management, and drought management, strong links will be created between the private sector beneficiaries and the public investments targeted.

Agriculture is also an important water user and a key driver for water quality changes. Here it will be paramount to develop solutions for pesticide and POPs application reductions in close partnership with the industry. This will involve the design of effective mechanisms incentivizing improved behaviours with private sector actors. Once new incentive mechanisms have been co-designed it will establish effective ownership the underpinning economic rationale to upscale solutions in the agricultural sector (including food processing).

This project will engage with the private sector in close cooperation with the lead government agencies. This participatory approach will ensure that private sector perspectives are understood during the SAP process. The private sector can champion many incentive changes on the ground to improve water quality or increase agricultural productivity. The food processing industry can be an instrumental partner when scaling up capacity building and improve standards.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Risks	Assessment with out mitigation	Management plan or measures	Assessment with mitigation
The postwar situation of Afghanistan still involves risks to human life, particularly during missions into the Panj River basin.	High	The project will collaborate closely with local district level authorities to ensure that risks are being monitored and minimized by adjusting the timing and location of travel and field work schedules. Additionally, video-conferencing will be promoted to reduce this risk further.	Medium
Ensuring effective multi-stakeholder involvement from both countries can be time and resource consuming – specially to ensure that people and institutions involved effectively represent their sector or stakeholders	High	The project will facilitate roundtables and task forces to ensure that knowledge is being shared among different stakeholders, and that the views of different groups are being taken into consideration.	Medium
Climate risks including incorrect assumptions regarding future climate change trajectories.	Medium	Historical, current and future projected changes in climate will be incorporated as an integral part of the planned assessments and management plans in the project. The differing adaptive capacities between the two countries will be considered when devising strategies to manage climate risks.	Low
Pilot projects are successfully designed for current climate conditions but fail for future climate conditions (e.g. increasing variability).	High	The pilots will be assessed against the backdrop of a wide range of climate change scenarios and safeguards will be applied.	Medium
Lack of sustained political support to establishing transboundary cooperation frameworks.	Medium	The project will adopt a step by step progressive approach to building mutual trust based on joint fact finding and consultative processes.	Low
Limited interest or involvement by target stakeholders, local communities and the inhabitants of the two basins.	Medium	The risk will be addressed throughout project implementation through systematic communication with local communities and other stakeholders, and through their involvement in the Annual Stocktaking Meetings.	Low

National processes – particularly approvals for plans and legal mechanisms – may be complex and lead to uneven progress between countries that may undermine different countries interest/ engagement	High	The project will facilitate knowledge sharing and provide guidance based on lessons learned and other similar experiences – but this will not conditionate the normal processes in each country, and it is expected that countries will move at difference paces. When necessary, informal discussion forums (e.g. regional workshops) at the same time formal processes (e.g. setting up an advisory group) are being set up, to avoid time lags.	Medium
Weak participatory processes, with no meaningful integration of the often under represented (marginalized) households depending on irrigated agriculture.	High	The project has gone through an extensive consultation process but has been limited to the national and regional levels – the project needs to be brought to the local level to assess that it will have a positive impact on households and responsive to their needs. During the PPG phase or early implementation, once pilot locations have been decided, the project will follow the Free Prior and Informed consent methodology to communities about the aims of the project and obtain their approval to participate.	Medium
<p>Risks related to COVID-19:</p> <p>a) Delays due to COVID-19 lead to slow implementation or stalling, and/or impacts the stakeholder engagement process.</p> <p>b) Impacts from COVID-19 affects the availability of technical expertise and capacity.</p> <p>c) Enabling environment and changing government priorities/ availability of co-financing.</p> <p>d) Future risks of similar crises (including from human-livestock-wildlife interaction)</p>	Medium	<p>Potential impacts of COVID-19 will be closely monitored.</p> <p>a) The project will implement adaptive management, and the work plan and stakeholder engagement plan would be adjusted, if necessary, to reflect the impacts of COVID-19. It is anticipated that, even if face-to-face interactions are reduced, the project would still be able to organize meaningful consultations with local stakeholders through the local representatives. Remote communication via email, online meetings and phone may be used increasingly to adjust to the new situation.</p> <p>b) It is not currently anticipated that the COVID-19 restrictions would affect the availability of national expertise. The project relies mostly on national experts for its implementation. With regard to any international experts, it is expected that expertise could be provided remotely, if necessary.</p> <p>c) As explained above, increasing exports as well as environmental protection, poverty alleviation, and green economic recovery are among the priorities of the Governments, which is aligned with the GEF-7 project goals. Measures are being developed under the socioeconomic response frameworks and the COVID response plans both Governments have put in place. These aim to support the socio-economic recovery.</p>	Medium

		<p>conomic recovery and increase resilience. Availability of co-financing is not anticipated to be affected due to the additional investments in the COVID-19 response.</p> <p>d) The GEF-7 project will ensure implementation of the One Health approach, contributing to a coordinated approach in promoting public health, animal health, plant health and environmental outcomes, including in the area of human-livestock-wildlife interface.</p>	
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COVID-19 pandemic: Short, medium, and long-term effects

COVID-19 impacted on the life of many Central Asian countries, including Afghanistan and Tajikistan. According to the John Hopkins University of Medicine statistics Afghanistan had 39,096 cases and 1,445 deaths and Tajikistan 9,432 cases and 73 deaths, as of 23 September 2020). Most of these cases located in the major cities. Within the Panj River basin the number of reported cases has been much lower with 428 cases and 7 deaths in Badakhshan, Afghanistan, and Gorno-Badakhshan and Kathlon, Tajikistan, recording each less than 1% of the national toll.

The largely rural and remote parts of the Panj River basin constrain the limit the capacity of local authorities and international agencies to deal with pandemics, making them especially vulnerable to the economic and social impacts of the coronavirus. However, the limited international travel these region experiences provided also a shield from larger COVID infection spikes.

The early design of the proposed project has taken steps to minimize the risks related to the COVID-19 global pandemic in the area of community health. While the project will not directly generate risks related to construction or hazardous materials, there is a risk that travel to or from areas where COVID-19 is prevalent could pose a risk to the islands' population, and to project staff, consultants/contractors. The project detailed design will include active steps to mitigate this risk, including training on pandemic-related guidance for project staff and stakeholders during the inception phase, and the expansion of standard monitoring of project operations and ensure that they are in conformity with FAO policies regarding travel, risk reduction, and other areas regarding the COVID-19 pandemic. The Project Manager will report on compliance to the Project Steering Committee and take any necessary steps to protect the health of staff, consultants/contractors, and beneficiaries required by the situation.

The COVID-19 pandemic affects jobs and livelihoods in many sectors, including those related to freshwater resources. The proposed project will improve the resilience of communities to climate change, conservation of the integrity of freshwater ecosystems, and fostering environmentally sustainable water resources management, which in combination will improve the COVID related recovery process and improve the long-term resilience of communities to future shocks.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

The GEF Agency - The project GEF Implementing Agency - FAO – will be responsible for the correct project implementation vis a vis the GEF. FAO will provide project oversight and quality assurance role involving FAO staff in Country Offices and at regional and headquarters levels. Project Assurance shall be totally independent of the Project Management function. The quality assurance role supports the SC and EA by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. This is covered by the GEF Agency.

The Steering Committee - The Government nominated Representatives of the beneficiary countries, FAO and lead agencies from both countries will form the project's Steering Committee (SC). The SC will meet periodically, and be responsible for taking corrective action as needed to ensure the project achieves the desired results. In order to ensure FAO's ultimate accountability, RSC decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. The Beneficiary Representatives represent the interests of those who will ultimately benefit from the project. The Beneficiary Representatives primary function within the RSC is to ensure the realization of project results from the perspective of project beneficiaries and in accordance with the objectives of the project. Additionally, Joint Technical Committees will be established to guide the TDA-SAP process.

The Executing Agency – Project execution will be decided during the PPG by the relevant ministries in each country. The process will involve the transparent and competitive selection of third parties for the main project components, including implementing the TDA, conducting capacity building, designing and implementing the SAP process (incl. visioning), running the PMU, and implementing pilot projects. Government agencies may be able to execute pilots within themselves while all transboundary activities will be executed by selected third parties.

The Project Management Unit (PMU) will provide the technical oversight of the work executed in both countries. The PMU will be responsible for the day-to-day management of consultants and the overall engagement process. The PMU will also be responsible for the procurement of individual consultants. The Manager/Chief Technical Advisor leading the PMU will work full time for the duration of the project, and be responsible for day to day execution of project activities and procurement, including coordination at the country/island level. She/he will act as Secretary of the SC meetings, responsible for providing the required documentation and support.

National Leads Agencies - Each country will have a national execution team, which will be responsible for conducting the various project activities Project activities at the national level, will be executed in collaboration with local community groups, private sector, and local relevant committees. This will provide valuable support in ensuring successful implementation of proposed project interventions.

Figure 2 provides an overview for the organization structure proposed for this project. Component 4 includes the implementation of a mechanism for structured exchanges with ongoing relevant projects and initiatives (see Baseline section above). The project will create effective links with other projects as listed in Table 1.

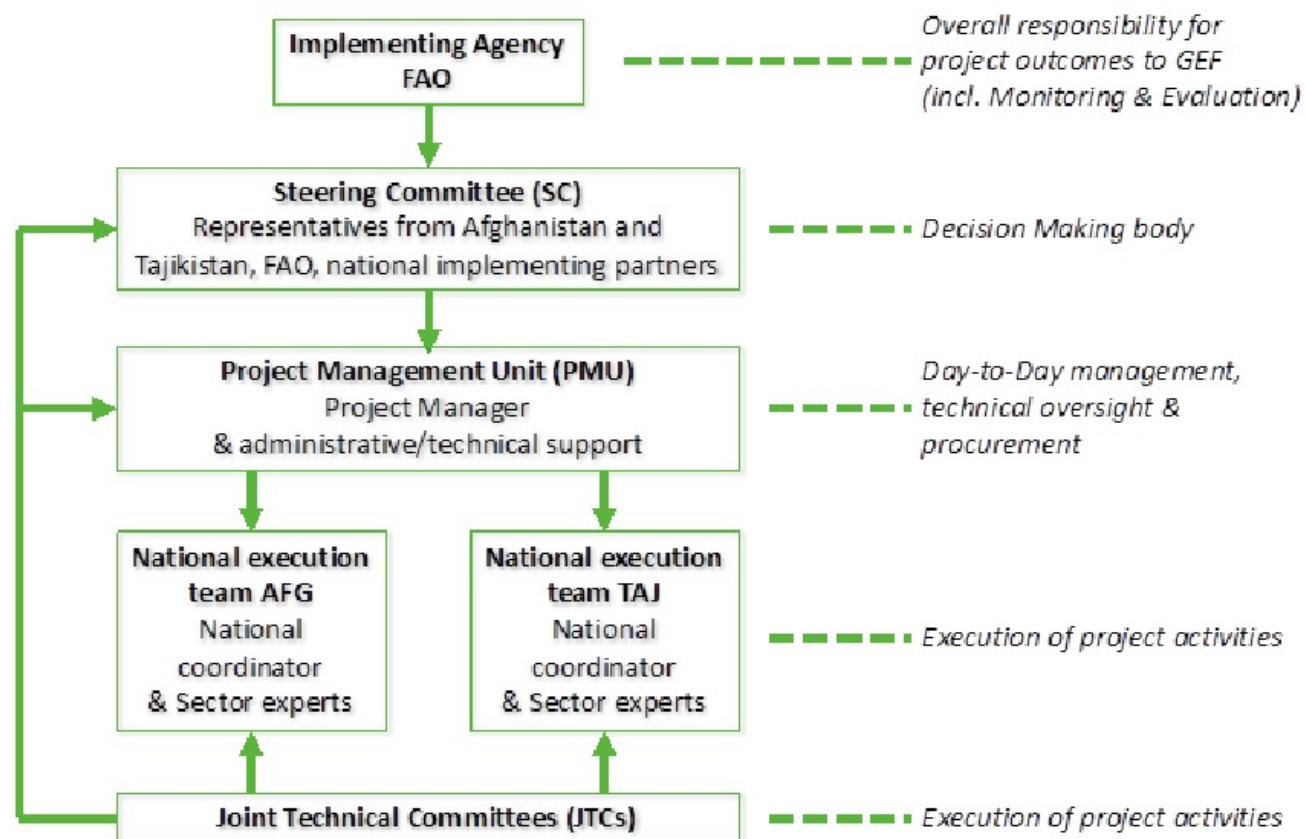


Figure 2: Project Organisational Structure

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

The project would support a wide range of national priorities in Afghanistan, including:

- The National Water Affairs' Regulation Law was endorsed in Feb 2020 and aims for improving the water resources management. It defines river basins and sub-basins as the main planning entity and promotes Integrated Water Resource Management (IWRM). It introduced a participatory management approach with the promotion of the traditional Mirab system and active participation of local communities. The new Law also defines water as an economic good and introduces the polluters pay principal.
- The Climate Resilient National Water Strategy (2019-2025) established a vision for Afghanistan's Climate-Resilient Water Resources Development and Management to ensure adequate and reliable water supply for present and future generations, to minimize the adverse impacts of climate change and climate variability, to improve resilience and adaptive capacities, and to improve water security, energy security and food security. Ultimately, these goals aim to eliminate poverty, increase employment, deliver sustainable economic and social development, and improve the livelihoods and quality of life for all Afghans. The CRNWS targets the assessment and improved planning of water resource use, augmenting water availability, improving water service provision, decentralizing management & coordination, reducing water-related climate risks, improving water governance and transboundary water management.
- Afghanistan's Climate Change Strategy and Action Plan (ACCSAP, 2015) which provides a clear policy, strategy, institutional framework and action plan for national efforts to address climate-induced impacts. The ACCSAP emphasizes adaptation measures to address the impacts of climate change and identifies agriculture, sustainable water management, and DRM as key features to build resilience of communities and their key source of livelihoods, agriculture.
- The Afghanistan National Peace and Development Framework (2021-2025), defines a five year plan to realize the decades' long hopes of all Afghans for a peaceful and prosperous Afghanistan. This framework will continue the agenda to eradicate poverty, develop Afghanistan into a self-reliant and productive economy connected to the region and the world, invest in strong state institutions that are citizen-centred, while also continue to advance our agenda to address the risks imposed by COVID-19.
- The National Water Affairs Regulation Authority (NWARA) newly endorsed five years plan (2021-2025), which aims for improved water security.
- Afghanistan's National Development Strategy (2008-2013), which builds on climate scenarios of the Fifth Working Group of the Intergovernmental Panel on Climate Change (IPCC) for the Central Asia region and the Sustainable Development Goals (SDG).
- Afghanistan's Intended Nationally Determined Contributions (INDC, 2017).

The project would equally support a range of national priorities defined by the Government of Tajikistan, including:

- Tajikistan's current process to reform the water sector, which involves a robust framework to manage Nexus trade-offs between water, food, energy, and the environment. The reform's main goals include the environmentally sustainable Management of water and improving water resources management through the full implementation of the basin and integrated water resources management (IWRM). the Government of the Republic of Tajikistan adopted the Water Sector Reform Program of the Republic of Tajikistan for the period of 2016-2025 by the Decree of December 30, 2015, No. 791.

- Tajikistan's law on pastures (2013) initialised decentralised management of pastures to improve landscape management and reduce disaster risks. This law addresses the risks from overgrazing leading to increased erosion and sedimentation of waterways, which increases the risk and magnitude of floods. It also magnifies the effects of droughts.
- Tajikistan's National Strategy of Adaptation to Climate Change (2019-2030), which targets flood risk reduction and improved flood management as well as improved drought management.
- Tajikistan's National Development Strategy 2030, which aims to ensure integrated water resource management, food and energy security, sustainable irrigation and improved rural livelihoods, and a reduction of poverty by 50%.
- Tajikistan's Intended Nationally Determined Contributions (INDC, 2015).

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The project is intended to introduce substantial improvements to the current collaboration between Afghanistan and Tajikistan. While the project will focus on the Panj River basin it will also improve water management issues for wider Amu Darya basin and the Aral Sea. Integrated water management and basin planning to be efficiently applied in practice needs both knowledge and practical tools, which the project will strive to enhance. Well-planned structured stakeholder consultation processes in order to facilitate improved drought and flood risk management and improve water quality will be part of the knowledge management effort together with the participatory design of the monitoring protocols and data processing. The project will facilitate direct exchanges on best practices and enhance capacity and expertise among relevant national entities through collecting and disseminating the shared knowledge for the common benefit of all, enhancing national and local capacity in transboundary water knowledge management, and applying lessons learned throughout the region and beyond, via IW LEARN services.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Low			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

1. At Project level, FAO applies a risk management process focused specially on individual Project risks, with the purpose of:

- Identifying, assessing and managing social and environmental risks and potential project impacts;
- Adopting a hierarchy of mitigation measures;
- Promoting sustainable food and farming systems.

2. FAO has nine (9) social and environmental standards that must be met by any Project funded or approved by the Organization. The following table gives an overview on the assessment of these 9 standards for the propose project:

SAFEGUARD	TRIGGER QUESTIONS	APPLICABLE?
ESS 1: Natural Resource Management	Would this project: 1) result in the degradation (biological or physical) of soils or undermine sustainable land management practices? or 2) include the development of a large irrigation scheme, dam construction, use of waste water or affect the quality of water? or 3) reduce the adaptive capacity to climate change or increase GHG emissions significantly? or 4) result in any change to existing tenure rights (formal and informal) of individuals, communities or others to land, shery and forest resources?	NO
ESS 2: Biodiversity, ecosystems and natural habitats	Would this project be executed in or around protected areas or natural habitats, decrease the biodiversity or alter the ecosystem functionality, use alien species, or use genetic resources?	NO
ESS 3: Plant Genetic Resources for Food and Agriculture	Would this project: 1) introduce crops and varieties previously not grown, and/or; 2) provide seeds/planting material for cultivation, and/or; 3) involve the importing or transfer of seeds and orplanting material for cultivation or research and development; 4) supply or use modern biotechnologies or their products in crop production, and/or 5) establish or manage planted forests?	NO
ESS 4: Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture	Would this project introduce non-native or non-locally adapted species, breeds, genotypes or other genetic material to an area or production system, or modify in any way the surrounding habitat or production system used by existing genetic resources?	NO
ESS 5: Pest and Pesticide Management	Would this project: 1) result in the direct or indirect procurement, supply or use of pesticides: on crops, livestock, aquaculture, forestry, household; or as seed/crop treatment in eld or storage; or through input supply programmes including voucher schemes; or for small demonstration and research purposes; or for strategic stocks (locust) and emergencies; or causing adverse effects to health and/or environment; or 2) result in an increased use of pesticides in the project area as a result of production intensification; or 3) result in the management or disposal of pesticide waste and pesticide contaminated materials; or 4) result in violations of the Code of Conduct?	NO
ESS 6: Involuntary displacement and resettlement	Would this project permanently or temporarily remove people from their homes or means of production/livelihood or restrict their access to their means of livelihood?	NO
ESS 7: Decent work	Would this project affect the current or future employment situation of the rural poor, and in particular the labor productivity, employability, labor conditions and rights at work of self-employed rural producers and other rural workers?	NO
ESS 8: Gender equality	Could this project risk be overlooking existing gender inequalities in the participation of men and women in decision-making and/or in their differential access to productive resources, services and markets?	NO
ESS 9: Indigenous Peoples and Cultural Heritage	Would this project: 1) have indigenous peoples living outside the project area where activities will take place; or 2) have indigenous peoples living in the project area where activities will take place; or 3) adversely or seriously affect indigenous peoples' rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance systems, and culture or heritage (physical and non-physical or intangible) inside and/or outside the project area; or 4) be located in an area where cultural resources exist?	NO

3. Based on the answers provided in the Environmental and Social Screening Checklist, the application of these standards for the proposed project allows concluding that the proposed action is classified as LOW risk.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
Panj PIF Review Yellow-Marked	
ToC Panj	
Panj Project - Climate Risk Screening Summary	
FAO ESS Screening Checklist-Panj	
Risk Certification	

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Schah - Zaman Maiwandi	Director General and GEF Operational Focal Point Afghanistan	National Environmental Protection Agency	10/4/2020
Sheralizoda Bahodur	Chairman of the Committee for the Environmental Protection under the Government of the Republic of Tajikistan and GEF Political and Operational Focal Point	Committee for the Environmental Protection	10/1/2020

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

The project will focus on the Panj River basin, which is shared by Afghanistan and Tajikistan.

Coordinates are

Northern boundary: 38°51'41.1"N ß Southern boundary: 36°41'30.0"N

Western boundary: 68°53'25.9"E ß Eastern boundary: 75°06'27.7"E

