ADAPTATION FUND

SINGLE COUNTRY/ REGIONAL INNOVATION PROJECT/PROGRAMME PROPOSAL

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Resilience innovation and scaling ecosystem Uzbekistan: climate intelligence, adaptation solutions and finance for resilient communities
Country/ Countries:	Uzbekistan
Thematic Focal Area[1]:	Innovative Climate Finance, Disaster risk reduction, social innovation
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	United Nations Industrial Development Organization
Executing Entities:	National Committee on Ecology and Climate Change of the Republic of Uzbekistan, UNIDO
Amount of Financing Requested:	5,000,000 (in U.S. Dollars Equivalent)

Project Background and Context:

The project adopts an integrated approach to strengthen climate adaptation in Uzbekistan by linking climate intelligence, early warning systems, SME-led adaptation solutions, and adaptation finance. It supports the transition from fragmented and reactive responses towards an anticipatory adaptation ecosystem that connects climate data, locally adapted solutions, finance, and policy to address increasing risks from water scarcity, desertification, land degradation, dust storms, and declining agricultural productivity.

Uzbekistan is highly vulnerable to climate change due to its arid climate, dependence on transboundary water resources, and reliance on climate-sensitive sectors. Increasing temperatures, drought, glacier retreat, and worsening water stress—combined with the legacy of the Aral Sea crisis—are threatening agriculture, ecosystems, and rural livelihoods. While adaptation-oriented SMEs offer practical solutions, they face major barriers to scaling, and financial institutions have limited capacity to finance adaptation investments. The project

[1] Thematic areas are agriculture, coastal zone management, disaster risk reduction, food security, forests, human health, innovative climate finance, marine and fisheries, nature-based solutions and ecosystem-based adaptation, protection and enhancement of cultural heritage, social innovation, rural development, urban adaptation, water management, wildfire management.

addresses these gaps by strengthening climate intelligence, supporting adaptation SMEs, and improving the enabling environment for adaptation finance. [2] [3]

Geography, climate and environmental context

Uzbekistan is a landlocked, predominantly arid country whose economy and rural livelihoods depend heavily on the Amu Darya and Syr Darya river systems. Climate change is intensifying water scarcity through higher temperatures, changing snowmelt and glacier dynamics, and increasing climate variability.

The drying of the Aral Sea has created the Aralkum Desert, generating frequent dust and salt storms that degrade soils, damage ecosystems, reduce agricultural productivity, and affect public health. Together with land degradation and water scarcity, these pressures increase vulnerability across agriculture, water resources, ecosystems, and rural livelihoods, highlighting the need for integrated adaptation based on climate intelligence, sustainable land and water management, innovation, and finance.[4] [5]

Economic and development context

Uzbekistan is undergoing economic reforms to strengthen private-sector-led growth and green development. Agriculture remains central to the economy, contributing around one quarter of GDP and employment while consuming approximately 90% of national water resources. Climate change therefore poses significant risks to food security, rural livelihoods, and economic development through increasing water scarcity, heat stress, salinization, and declining agricultural productivity.

Although reforms are underway, adaptation remains constrained by limited localized climate information, insufficient financing for climate-resilient technologies, and weak market mechanisms for scaling adaptation solutions, particularly for SMEs.[6] [7]

Climate trends and projections

Climate projections indicate increasing temperatures, more frequent droughts, greater heat stress, and worsening water scarcity across Uzbekistan (Figure 1). Crop yields could decline by 25–63% by 2050 without adequate adaptation, while changes in snowmelt and glacier-fed river flows will further increase pressure on already fully allocated water resources in the Amu Darya Basin.[8] [9]

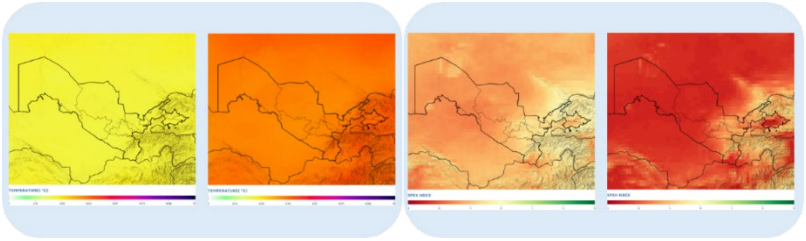


Figure 1: CMIP6 ensemble projected change in annual temperature (left) and Drought Index (right) by 2040-2059 (left) and by 2080-2090 (right) relative to 1995-2014 baseline under RCP[10]

Current and future vulnerabilities, risks and impacts of climate change

Agriculture, water and rural livelihoods

Uzbekistan's climate vulnerability is strongly linked to the interaction between agriculture, water scarcity, and land degradation. Irrigated agriculture is essential for production, yet the sector consumes the overwhelming majority of national water resources. Climate-induced water stress therefore directly affects crop production, food security, rural employment, and household income.

[2] https://openknowledge.worldbank.org/entities/publication/686d0297-b311-4296-ab33-51d1859c6b32

[3] Uzbekistan | World Bank Group

[4] Greening the Desert: The Role of Landscape Restoration in Uzbekistan's Battle Against Sand and Dust Storms

[5] unccd.int/sites/default/files/2022-10/Regional strategy_SDS_англ_print.pdf

[6] https://www.worldbank.org/en/news/press-release/2025/05/21/uzbekistan-to-modernize-its-irrigation-infrastructure-with-world-bank-support

[7] Uzbekistan - Third Agriculture Public Expenditure Review

[8] 15838-Uzbekistan Country Profile-WEB.pdf

[9] https://www.futurewater.nl/wp-content/uploads/2024/06/UZB_ClimateAdaptationPrioritization_Final_Report.pdf

[10] Uzbekistan - Mean Projections (CMIP6) | Climate Change Knowledge Portal

Rising temperatures and increasing drought risks reduce soil moisture, increase irrigation demand, and worsen crop stress. At the same time, land degradation and salinization reduce productivity and undermine the long-term viability of farming systems. The World Bank's landscape restoration analysis notes that dependence on irrigated agriculture and projected climate changes could threaten food security, while poorer households are particularly exposed because they spend a relatively high share of their income on food.[11]

Land degradation, desertification and dust storms

Desertification is one of the most severe climate-related challenges facing Uzbekistan. Land degradation is driven by climate deterioration, water scarcity, soil salinization, and the legacy of the Aral Sea disaster. UNDP has highlighted that land degradation in Uzbekistan significantly affects biodiversity, ecosystem services, agricultural productivity, climate resilience, and the livelihoods of rural residents.[12]

The Aral Sea region is particularly affected. Dust and salt storms from the exposed seabed contribute to soil degradation, reduced agricultural productivity, health impacts, and loss of livelihoods. The national State of the Environment platform notes that water pollution and dust-salt storms from the dried Aral Sea bed are linked to increased incidence of anemia, kidney disease, gastrointestinal disease, respiratory disease, cardiovascular disease, and cancer; it also notes that agricultural yields in the Aral Sea region are significantly below normal levels and that environmental decline has contributed to major job losses. [13]

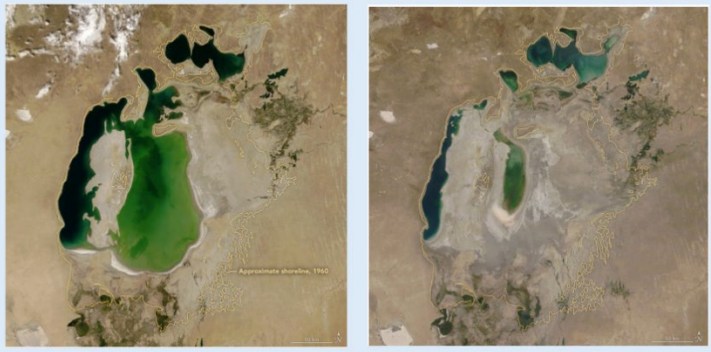


Figure 2: Aral Sea Shrinkage 2000 (left) and 2018 (right)

Public health and social vulnerability

Climate change also poses public health risks through heat stress, waterborne diseases, dust exposure, and reduced food security. The World Bank Climate Change Knowledge Portal notes that climate stressors threaten multiple sectors, while rising temperatures, drought, and water shortages have implications for health, livelihoods, and poverty. These impacts are not evenly distributed. Rural households, women, youth, low-income communities, and populations in degraded or water-stressed regions have lower adaptive capacity and fewer resources to respond.

[11] https://documents1.worldbank.org/curated/en/099050324083529790/pdf/P17710818d91810e31a91f1da9f5387c0f4.pdf

[12] https://www.undp.org/uzbekistan/press-releases/ensuring-neutrality-land-degradation-assessment-and-solution-methods

[13] https://uz-eco.tilda.ws/en

Identified Vulnerable Regions and Groups

The project will apply a national approach while prioritizing regions and communities with high exposure to water stress, desertification, land degradation, and climate-sensitive livelihoods. The exact geographic targeting will be refined during the project preparation and inception phases based on climate risk data, consultations, and alignment with national priorities. Initial vulnerable geographies include the Aral Sea region, arid and semi-arid dryland areas, irrigated agricultural zones affected by water scarcity and salinization, and rural communities dependent on climate-sensitive livelihoods.

Table 1: Vulnerability Assessment Uzbekistan

Vulnerable region/system	Indicative target regions	Main climate-related challenges	Most vulnerable groups/sectors	Indicative beneficiary focus	Potential SME adaptation solutions[14]
Aral Sea region and Aralkum-affected areas	Karakalpakstan, Khorezm, Muynak, Surkhandarya	Dust storms, desertification, salinity, water stress	Rural households, farmers, women, pastoralists	Approx. 5,000 direct beneficiaries through climate advisory, restoration and resilient livelihoods	Dust storm advisories, saxaul planting services, drought-resilient crops, water-saving irrigation
Irrigated agricultural zones	Khorezm, Fergana Valley, Surkhandarya	Water scarcity, salinization, heat stress	Smallholder farmers, agri-SMEs, women farmers	Approx. 4,000 direct beneficiaries through climate-smart agriculture and irrigation solutions	Precision irrigation, soil moisture monitoring, digital climate advisory
Dryland and pasture systems	Navoi, Bukhara	Drought, pasture degradation, water scarcity	Pastoralists, livestock producers, rural youth	Approx. 3,000 direct beneficiaries through resilient livestock and water management	Fodder systems, drought monitoring, solar water pumping
High-density agricultural areas	Andijan, Namangan, Fergana, Surkhandarya	Water competition, floods, land degradation	Farmers, agro-processors, youth entrepreneurs	Approx. 2,000 direct beneficiaries through SME deployment and climate information services	Flood early warning, climate-smart processing/storage
Institutional and financial ecosystem	National	Weak adaptation finance and SME support systems	SMEs, banks, incubators, local authorities	25-30 SMEs supported; 8-10 financial institutions engaged	Adaptation finance tools, investment readiness support

[14] Based on official climate information and monitoring data, where applicable

At concept stage, the project is expected to directly benefit approximately 15,000 people across priority climate-vulnerable regions, including smallholder farmers, women entrepreneurs, SME employees, youth, and rural households. Indirect beneficiaries are expected to exceed 75,000 people through improved climate information systems, early warning services, ecosystem strengthening, and replication of adaptation solutions. Final geographic targeting and beneficiary estimates will be refined during full proposal preparation in consultation with national and regional stakeholders.

Identified Vulnerable Segments of the Population

Smallholder farmers and rural producers

Smallholder farmers and rural producers are highly exposed to water scarcity, heat stress, crop loss, soil degradation, and market instability. Their adaptive capacity is constrained by limited access to finance, extension services, climate information, and resilient technologies. Many are dependent on irrigation systems and water availability that are increasingly vulnerable to climate change.

Women in agriculture and rural enterprises

Women face specific adaptation barriers related to limited access to land, collateral, finance, technologies, and decision-making processes. These barriers reduce their ability to invest in climate-resilient practices or benefit from emerging adaptation markets. The project will therefore integrate gender-responsive outreach, selection criteria, capacity building, and monitoring across the SME pipeline and community engagement processes.

Youth and emerging entrepreneurs

Youth are both vulnerable to climate impacts and central to innovation. Rural youth face limited employment opportunities, and climate change may further reduce livelihood options in agriculture and natural resource-based sectors. At the same time, young entrepreneurs and startups can play an important role in digital climate services, agritech, water efficiency, and climate advisory tools if supported with targeted technical assistance and financing pathways.

Low-income households in climate-exposed regions

Low-income households are disproportionately affected by food price increases, income instability, health risks, and loss of natural resource-based livelihoods. These groups often lack access to early warning information, financial products, and adaptive technologies. The project's focus on localized tools, SME-led solutions, and inclusive finance is intended to address these barriers.

Adaptation SMEs and Innovation Ecosystem

Adaptation SMEs represent both a major opportunity and a key constraint for climate adaptation in Uzbekistan. They can provide locally adapted technologies and services—including water-saving technologies, climate-smart agriculture, advisory services, land restoration, and digital climate tools—but often lack technical assistance, investment readiness, impact measurement frameworks, and access to finance. At the same time, vulnerable communities frequently lack awareness, purchasing power, or financing to adopt these solutions. The project addresses this "missing middle" by strengthening adaptation SMEs and connecting them with finance and end users. Adaptation SMEs are defined as enterprises that help users understand, reduce, or manage physical climate risks while generating long-term resilience benefits.

Problem Statement

The proposed project aims to address four interrelated barriers that prevent Uzbekistan from scaling adaptation responses commensurate with increasing climate risks.

a) Fragmented climate intelligence and weak anticipatory adaptation

Climate data and risk information remain fragmented across institutions and are not consistently translated into accessible tools for communities, SMEs, farmers, and local governments. Existing climate information products are often insufficiently tailored to end-user decision-making needs and are not systematically linked to practical adaptation actions. In several climate-vulnerable regions, limitations in localized meteorological observations and monitoring capacity further constrain the provision of accurate and actionable climate services. As a result, adaptation remains reactive, and vulnerable populations are unable to take timely action to reduce losses from droughts, dust storms, land degradation, and water scarcity.

b) Limited access to locally appropriate adaptation solutions

Vulnerable communities require practical, affordable, and context-specific adaptation solutions, but the market for such solutions remains underdeveloped. SMEs and startups may already provide technologies or services with adaptation relevance, but they often lack the capacity to define, measure, and scale their adaptation impact. Without targeted support, promising solutions remain small-scale and disconnected from the needs of vulnerable communities.

c) Lack of appropriate finance and support for adaptation SMEs

Adaptation SMEs face significant barriers in moving from pilot or early-stage activity to growth and scale. They often lack investment plans, financial management systems, impact measurement frameworks, and collateral. Commercial financial institutions are generally unfamiliar with adaptation business models and may perceive them as too risky due to longer investment horizons, uncertain revenue streams, and limited benchmarks.

d) Weak integration of adaptation innovation into policy and financial systems

Adaptation innovation remains insufficiently embedded in national policy, planning, and financial systems. While Uzbekistan has important national frameworks, including its updated NDC and green economy strategies, the practical link between climate intelligence, SME innovation, adaptation finance, and national planning requires strengthening. The project will address this by integrating project tools into national systems, developing policy recommendations, and building a stronger evidence base for adaptation finance and SME-led resilience.

Climate Risk and Adaptation SME Solution Matrix for Uzbekistan

The following matrix provides an indicative mapping of climate risks, vulnerable groups, and potential SME-led adaptation solutions. It will be refined during project preparation and inception based on climate data, stakeholder consultations, and market assessment.

Table 2: Climate Risk and Adaptation SME Solution Matrix

Region	Main provinces (viloyats)	Main climate challenges	Most climate vulnerable socio-economic sector & group	Potential / Current solutions provided by adaptation SMEs
Aral Sea Region (Karakalpakstan)	Karakalpakstan (including Muynak), Khorezm	Severe desertification and land degradation; dust and salt storms from dried seabed; water scarcity and declining water quality; soil salinization	Agriculture, livestock, public health; smallholder farmers, pastoralists, women, children, low-income rural households	Salt- and drought-resistant crops; afforestation and shelterbelt services (e.g. saxaul planting); water-saving irrigation systems; salinity management solutions; climate-resilient livestock feed systems; air quality monitoring and early warning services; climate advisory services
Lower Amu Darya Basin and Transboundary Watersheds	Khorezm, Karakalpakstan	Water stress due to upstream withdrawals; inefficient irrigation systems; soil salinization; reduced agricultural productivity; transboundary water management challenges	Irrigated agriculture; smallholder farmers, irrigation-dependent communities, women farmers, water user associations	Precision irrigation and water-efficiency technologies; soil salinity management solutions; smart water management platforms; climate-informed irrigation scheduling; water recycling and drainage technologies; watershed monitoring tools
Central Arid and Semi-Arid Regions	Navoi, Bukhara	Increasing temperatures and droughts; land degradation and desert expansion; limited water availability; rangeland degradation	Livestock and agro-pastoral systems; pastoralists, rural SMEs, youth	Climate-resilient livestock systems; pasture management technologies; solar-powered water pumping; drought monitoring and advisory tools; drought-resilient fodder systems; alternative livelihoods (desert-based value chains)
Fergana Valley (high population density)	Andijan, Namangan, Fergana	Water scarcity and competition for water resources; inefficient irrigation; land degradation due to intensive agriculture; localized flash flood risks	Agriculture and agro-processing; smallholder farmers, agri-SMEs, women and youth entrepreneurs	Climate-smart agriculture technologies; efficient irrigation systems; soil moisture monitoring; digital climate advisory platforms; water-use optimization tools; agro-processing and storage solutions reducing post-harvest losses
Mountain and Foothill Regions	Tashkent region, Jizzakh, Samarkand, Surkhandarya	Glacier melt and changing hydrology; seasonal water variability; increased risk of floods, mudflows and landslides; sand and dust storm exposure in parts of Surkhandarya	Agriculture, water management, infrastructure; rural communities, small farmers, communities in hazard-prone areas	Early warning systems (floods, landslides, mudflows); climate risk mapping and monitoring services; hydrological forecasting tools; water storage and management solutions; slope stabilization and nature-based solutions
Urban and Peri-Urban Areas	Tashkent city, Samarkand, Bukhara	Heatwaves and urban heat island effect; water supply stress; flash flooding from extreme rainfall; infrastructure vulnerability	Urban services, SMEs, infrastructure; urban poor, informal settlements, SMEs, youth	Urban cooling solutions (green roofs, shading systems); smart water management systems; flood management and drainage solutions; climate-resilient infrastructure services; digital early warning and risk communication tools

Project / Programme Objectives:

The project's objective is to strengthen the climate resilience and adaptive capacity of vulnerable communities in Uzbekistan by establishing an integrated climate intelligence system, enabling the deployment and scaling of locally adapted, SME-driven solutions, and catalyzing an inclusive adaptation finance ecosystem that supports anticipatory, data-driven, and sustainable adaptation at scale.

Project / Programme Components and Financing:

Project/Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
1. Climate Intelligence for Adaptation Decision-Making and Institutional Integration	1.1: Vulnerable communities, SMEs and local authorities use climate intelligence to reduce climate risks	1.1.1: Climate intelligence and early warning data from Uzhydromet and partner institutions integrated into user-oriented adaptation decision-support services 1.1.2: Localized climate risk advisory tools deployed for vulnerable communities, SMEs, and local authorities 1.1.3: Climate-informed adaptation planning and response protocols institutionalized in priority sectors and regions	Uzbekistan	1,200,000
	1.2: Institutional capacities strengthened to apply climate intelligence for	1.2.1: National and sub-national institutions trained in the application of climate		

	anticipatory adaptation and resilience planning	intelligence for adaptation planning and investment prioritization 1.2.2: Operational coordination and data-sharing mechanisms established between climate, finance and adaptation actors 1.2.3: Research Center for Combating Desertification strengthened to deliver climate risk analytics and decision-support services		
2. Catalytic Support and Deployment of Adaptation Solutions	2.1: Adaptation SMEs identified, strengthened, and enabled to deliver viable solutions	2.1.1: Adaptation SME pipeline identified through calls for proposals 2.1.2: MSMEs supported through incubation and acceleration programmes 2.1.3: Adaptation Performance Targets and investment plans developed	Uzbekistan	1,700,000
	2.2: Adaptation solutions financed, deployed, and scaled in vulnerable communities	2.2.1: Performance-based grant mechanism implemented to support adaptation SMEs		

		2.2.2: Adoption of solutions facilitated with safeguards applied		
3. Strengthening the Adaptation Finance Ecosystem	3.1: Financial institutions capacitated to assess and invest in adaptation solutions	3.1.1: Climate risk assessment tools developed and applied 3.1.2: Adaptation impact assessment toolkits integrated 3.1.3: Capacity building programmes delivered	Uzbekistan	600,000
	3.2: Innovative adaptation finance instruments developed, and investment flows increased	3.2.1: Financial instruments co-designed 3.2.2: Investment pipeline developed and connected to financing partners		
4. Knowledge, Learning, and Replication of Adaptation Innovation	4.1: Evidence, learning, and adaptation innovation models generated and disseminated	4.1.1: Knowledge products and evidence on adaptation SMEs, climate intelligence applications, and adaptation finance generated and disseminated 4.1.2: National and regional knowledge-sharing and peer learning platforms supported	Uzbekistan	857,310

		4.1.3: Monitoring, evaluation, and adaptation impact learning systems operationalized		
	4.2: Replication and scaling pathways established for adaptation solutions and finance mechanisms	4.2.1: Replication strategies developed for scalable adaptation SME solutions and climate intelligence applications 4.2.2: Partnerships and investment linkages strengthened to support post-project scaling 4.2.3: Lessons and methodologies integrated into national and international adaptation innovation networks		
5. Total project/programme components				4,357,310
6. Project/Programme Execution cost				250,985
7. Total Project/Programme Cost				4,608,295
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)				391,705
Amount of Financing Requested				5,000,000

Projected Calendar:

Milestones	**Expected Dates**
Start of Project Implementation	July 2028

Mid-term Review (if planned)	July 2030
Project/Programme Closing	July 2032
Terminal Evaluation	September 2032

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Project Justification

At the core of the proposed project lies the development of a national climate adaptation ecosystem in Uzbekistan, built on a multi-dimensional and mutually reinforcing design. The project adopts an integrated approach that connects climate intelligence, innovation, and finance to address systemic barriers to adaptation. This is achieved through four interlinked components that together enable the generation, deployment, and scaling of adaptation solutions.

First, the project strengthens climate intelligence systems and early warning mechanisms to improve the ability of institutions and communities to anticipate and respond to climate risks. Second, it supports the development and deployment of adaptation solutions through a structured pipeline of small and medium-sized enterprises, ensuring that locally adapted technologies and services can be brought to scale. Third, it unlocks financing for these solutions by strengthening the capacity of financial institutions and introducing innovative financial instruments tailored to adaptation investments. Finally, the project ensures that these efforts are embedded within national systems through policy integration, capacity building, and knowledge management, enabling long-term sustainability and replication.

Theory of Change

Uzbekistan is increasingly vulnerable to climate change impacts, particularly driven by water scarcity, land degradation, and accelerating desertification in arid and semi-arid regions. These risks are already reducing agricultural productivity, degrading ecosystems, and threatening the livelihoods of vulnerable populations, especially rural communities dependent on climate-sensitive sectors. While national frameworks for climate adaptation are evolving, current responses remain fragmented, with limited operational use of localized climate intelligence, insufficient deployment of innovative adaptation solutions, and weak engagement of financial systems in supporting adaptation investments. As a result, adaptive capacity remains constrained, and adaptation actions are often reactive rather than anticipatory.

The proposed project addresses these barriers through an integrated and innovative approach that operationalizes climate intelligence for adaptation decision-making, supports the deployment and scaling of adaptation SMEs, strengthens adaptation finance ecosystems, and generates practical evidence and replication pathways for long-term resilience building.

The theory of change is based on the premise that reducing vulnerability and increasing resilience in Uzbekistan requires coordinated action across climate intelligence systems, adaptation innovation ecosystems, financing mechanisms, and knowledge-sharing structures, supported by strengthened institutional capacities and locally driven adaptation approaches.

The intervention logic is directly informed by the climate risks identified in the baseline analysis. Increasing temperatures, more frequent droughts, worsening water scarcity, land degradation and projected crop yield reductions of 25–63% by 2050 require adaptation decisions that are increasingly anticipatory rather than reactive. By improving access to localized climate intelligence, strengthening the deployment of adaptation solutions that directly address priority risks (such as water scarcity, salinization and desertification), and

increasing investment in these solutions, the project is expected to reduce climate exposure, improve adaptive capacity and enable more climate-resilient livelihoods in the most vulnerable regions of Uzbekistan.
First, IF existing climate intelligence and early warning systems are operationalized and translated into localized, user-oriented adaptation decision-support services, and IF climate risk information is made accessible and actionable for communities, SMEs, financial actors, and local authorities, THEN vulnerable populations and institutions will be better equipped to anticipate, plan for, and respond to climate risks. By enabling anticipatory actions such as adjustments in irrigation scheduling, crop selection, water allocation, restoration planning, livestock management, and preparedness measures for droughts, dust storms, and extreme heat, climate intelligence will reduce exposure to climate hazards, minimize climate-related losses, and strengthen adaptive capacity among vulnerable communities.
Second, IF adaptation SMEs are identified and supported through targeted technical assistance, adaptation impact management methodologies, and performance-based incentives linked to measurable Adaptation Performance Targets (APTs), THEN innovative, locally adapted, and scalable resilience solutions will be deployed in vulnerable communities and climate-sensitive sectors. This will contribute to scaling innovative adaptation practices, strengthening local resilience, and improving livelihoods while generating practical evidence on effective adaptation business models and deployment approaches.
Third, IF financial institutions are equipped with climate risk assessment methodologies, adaptation impact frameworks, and tailored financing approaches, and IF stronger linkages are created between adaptation SMEs and financing actors, THEN investment in adaptation solutions will increase and barriers to adaptation finance will be reduced. This will strengthen the enabling environment for adaptation investment, support scaling of viable resilience solutions, and improve long-term sustainability of adaptation enterprises.
Fourth, IF implementation lessons, adaptation methodologies, climate intelligence applications, and financing approaches are systematically documented, shared, and integrated into replication and learning mechanisms, THEN successful adaptation models can be scaled, replicated, and institutionalized beyond the project duration. This will strengthen long-term resilience planning, support adaptive learning, and contribute to broader adaptation innovation ecosystems within Uzbekistan and beyond.
These pathways are mutually reinforcing and generate cumulative impacts. Operational climate intelligence improves targeting and deployment of adaptation solutions; successful SME deployment generates evidence on resilience outcomes and adaptation performance; this evidence reduces perceived risks for financial institutions and strengthens investment readiness; and knowledge-sharing and replication mechanisms enable successful approaches to scale across sectors and regions.
Through this integrated and innovation-driven approach, the project contributes to a transformational shift from fragmented and reactive adaptation responses toward a coordinated, scalable, and sustainable adaptation ecosystem in Uzbekistan. This ecosystem strengthens anticipatory adaptation capacities, enhances resilience of vulnerable communities and ecosystems, mobilizes adaptation investment, and

generates practical models and evidence that can inform replication in other climate-vulnerable dryland contexts.

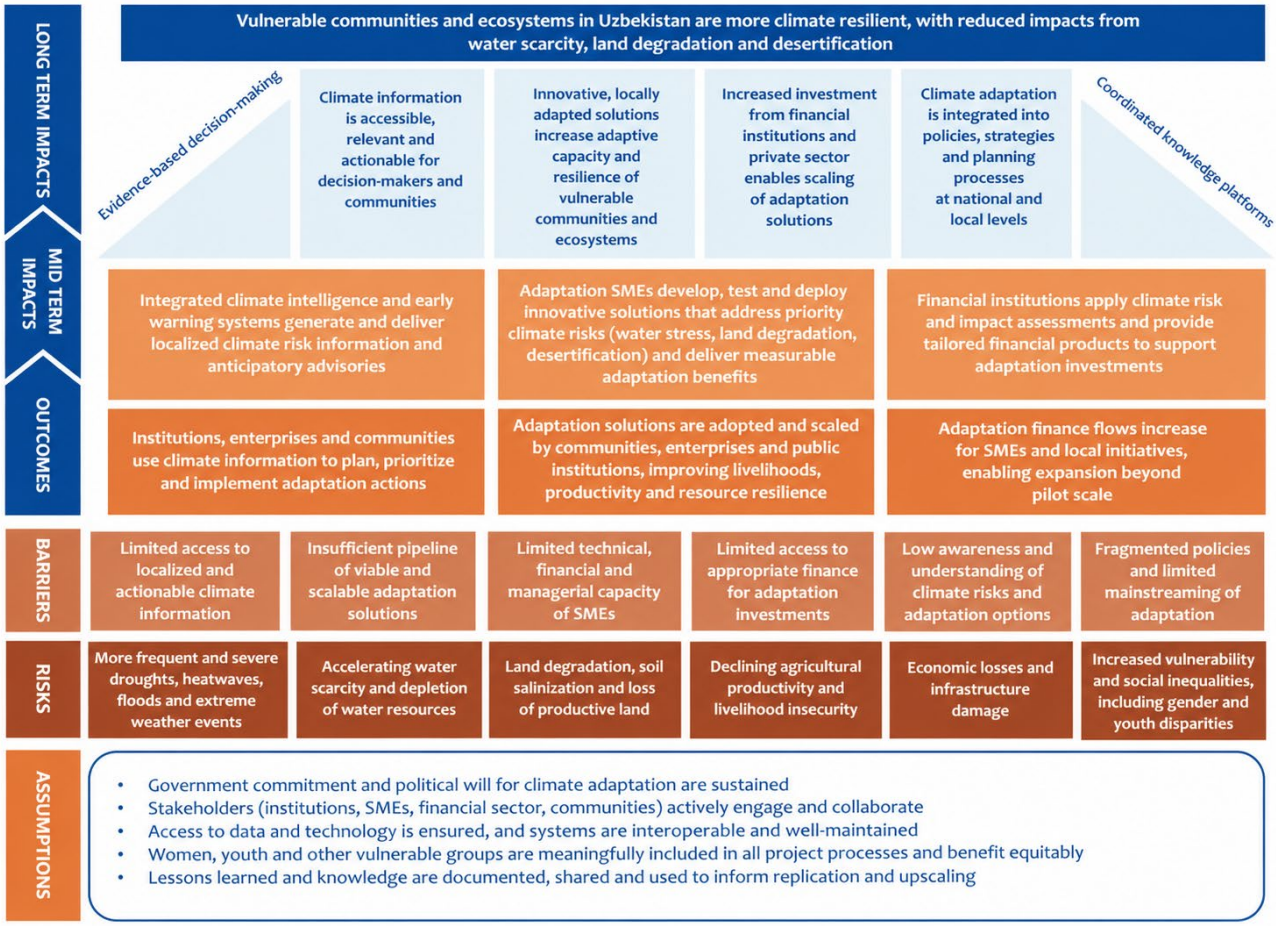


Figure 3: Theory of Change

Component 1: Climate Intelligence for Adaptation Decision-Making and Institutional Integration

Baseline situation: Uzbekistan has made significant investments in hydrometeorological modernization and climate services through Uzhydromet, the National Framework for Hydrometeorological and Climate Services, and initiatives such as GCF SAP022. However, climate information is not yet consistently translated into user-oriented services for vulnerable communities, local authorities, SMEs, or adaptation planning. Climate data remain fragmented across institutions, with limited interoperability between hydrometeorological services, research institutions, sectoral ministries, and local authorities. The design also reflects lessons from the completed AF/UNDP drought-resilience project in Karakalpakstan, particularly the need to connect climate information with locally applicable response measures, strengthen last-mile communication and embed service delivery within national and local institutions.

Existing systems primarily support hazard monitoring rather than anticipatory adaptation, localized planning, or climate-informed investment. Communities in regions affected by drought, desertification, salinization, and water scarcity often lack timely, actionable climate advisories linked to practical response measures. Institutional capacities to apply climate intelligence also vary across sectors and regions, resulting in reactive adaptation responses, particularly in climate-vulnerable areas such as Karakalpakstan, Khorezm, and dryland agricultural regions.

Proposed interventions*:* This component will strengthen the operational use of existing climate intelligence and early warning systems to support anticipatory adaptation, localized resilience planning, and climate-informed deployment of adaptation solutions. The project is designed to leverage existing national systems and complementary investments where available, but its delivery does not depend on the successful

completion of any individual external programme. Component 1 will utilize existing operational data, services and institutional capacities maintained by Uzhydromet and other national partners as the minimum baseline. Where complementary initiatives provide additional datasets, modelling capacity or infrastructure, these will enhance project outcomes but are not prerequisites for implementation. If complementary investments are delayed or modified, project-supported climate intelligence services will be adjusted to use available national datasets and institutional capacities while maintaining the project's core objectives. Rather than establishing parallel systems, the project will build on existing investments and institutional capacities of Uzhydromet, the Research Center for Combating Desertification, the National Committee on Ecology and Climate Change, and ongoing climate service initiatives by improving interoperability, localization, and user-oriented application of climate information.

Hydrometeorological data, satellite observations, desertification analytics, and climate risk information will be integrated into practical decision-support services for communities, SMEs, local authorities, financial institutions, and sectoral agencies. The component will also strengthen institutional coordination, data-sharing, and climate-informed planning across national and sub-national institutions to ensure climate intelligence is systematically integrated into adaptation planning, investment prioritization, and Components 2 and 3. For agriculture-focused climate services, the project will build on and interoperate with the near-real-time farm advisory system supported through the AF/IFAD project. No parallel agricultural advisory platform will be established. A technical mapping conducted during full proposal preparation will define existing functions, data flows, geographic coverage and remaining gaps before project-supported services are finalized. Uzhydromet and the Research Center for Combating Desertification will provide technical implementation support for Component 1 through agreed institutional responsibilities related to climate data integration, interoperability, and climate intelligence services under the overall coordination of the National Committee on Ecology and Climate Change.

Outcome 1.1: Vulnerable communities, SMEs and local authorities use climate intelligence to reduce climate risks

Output 1.1.1: Climate intelligence and early warning data integrated into user-oriented adaptation decision-support services

The project will develop practical climate intelligence services, including localized drought monitoring, desertification forecasting, salinization risk analytics, water stress advisories, and geospatial climate risk mapping. The project will also establish the technical and institutional interoperability required to support these services, including common data standards, metadata protocols, data exchange arrangements, APIs where appropriate, and formal data-sharing agreements between Uzhydromet, the Research Center for Combating Desertification, sectoral ministries and other participating institutions. These arrangements will enable the routine integration of hydrometeorological, geospatial, land degradation and sectoral datasets into a unified climate intelligence architecture for adaptation planning. Services will be tailored to the needs of farmers, pastoralists, water user associations, local authorities, SMEs, financial institutions, and water resource management agencies, combining near real-time monitoring, seasonal forecasts, and longer-term climate projections according to sectoral requirements. Particular attention will be given to priority regions where climate monitoring coverage is limited and additional data integration is needed. Where appropriate, artificial intelligence and machine-learning techniques will be explored to strengthen predictive analytics, pattern recognition, and localized adaptation recommendations. Building on existing investments, the project will strengthen interoperability between Uzhydromet, the Research Center for Combating Desertification, sectoral ministries, and local authorities to improve the accessibility, dissemination, and application of climate information. The intervention will prioritize downstream application of climate intelligence rather than developing new stand-alone infrastructure, complementing national hydrometeorological modernization efforts and avoiding duplication with ongoing initiatives.

Output 1.1.2: Localized climate advisory and early warning tools deployed for vulnerable communities, SMEs, and local authorities

The project will deploy localized climate advisory and early warning tools that build on existing systems while improving their usability for anticipatory adaptation by vulnerable communities, SMEs, and local authorities. User-oriented advisories will cover drought risk, irrigation planning, salinity management, dust storms, climate-smart agriculture, and water management, combining near real-time alerts with forecast-based

planning information. Advisory services will be linked to practical response options, enabling users to adjust planting schedules, optimize water use, protect livestock, prepare for dust storms, and prioritize climate-resilient investments. Digital and mobile dissemination approaches will be complemented by offline communication to ensure accessibility for rural and underserved communities. Advisory tools and dissemination mechanisms will be developed through participatory processes involving local communities, SMEs, and sectoral stakeholders, with particular attention to women farmers, pastoralists, and low-income rural households. All climate advisories and early warning services supported by the project will build upon official forecasts, observations and warnings issued by Uzhydromet. The project will support downstream interpretation and application of climate information for adaptation decision-making rather than the production of independent meteorological products. Governance arrangements and technical protocols will ensure consistency with national standards and the authoritative role of Uzhydromet. The project will not establish parallel forecasting systems or authorize SMEs to issue official warnings. Instead, SMEs will develop value-added applications, decision-support tools and sector-specific advisory services that translate authoritative climate information into practical adaptation guidance for farmers, communities, enterprises and financial institutions. In agricultural areas, advisory tools will use or complement existing AF/IFAD-supported systems and will only address demonstrated service gaps or additional user groups not already covered.

Output 1.1.3: Climate-informed adaptation planning and response protocols institutionalized in priority sectors and regions

The project will institutionalize climate-informed adaptation planning and anticipatory response approaches within national and sub-national planning systems through the development of operational protocols, planning guidelines, and coordination mechanisms that integrate climate intelligence into adaptation planning, investment prioritization, and deployment of resilience solutions. Climate intelligence will be integrated into planning processes in agriculture, water management, rural development, and desertification response, while local authorities and sectoral institutions in priority regions will be supported to apply climate risk information for preparedness planning, climate-responsive resource allocation, and coordinated adaptation responses. By embedding these approaches within existing institutional systems and planning frameworks, the project will strengthen long-term sustainability and national ownership of anticipatory adaptation.

Outcome 1.2: Institutional capacities strengthened to apply climate intelligence for anticipatory adaptation and resilience planning

Output 1.2.1: National and sub-national institutions trained in the application of climate intelligence for adaptation planning and investment prioritization

The project will deliver targeted capacity-building programmes for national and sub-national institutions to strengthen their ability to interpret and apply climate intelligence for adaptation planning, investment prioritization, and resilience decision-making. Training will focus on the practical application of climate risk information, climate-informed planning methodologies, localized risk assessment, and integration of climate considerations into sectoral planning. The project will also develop practical guidelines, operational manuals, and planning tools to support systematic integration of climate intelligence into adaptation planning and resilience investments, with particular attention to climate-vulnerable regions where institutional capacities remain limited.

Output 1.2.2: Operational coordination and data-sharing mechanisms established between climate, adaptation, and financial actors

The project will establish operational coordination mechanisms together with institutional and technical arrangements for interoperable climate information management. This will include agreed governance arrangements for data sharing, standardized data exchange protocols, institutional responsibilities for data maintenance, and procedures for integrating datasets across participating institutions. Technical working groups will oversee implementation and continuous improvement of the interoperability framework. Particular emphasis will be placed on strengthening collaboration between Uzhydromet, the Research Center for Combating Desertification, the Ministry of Water Resources, ICWC SIC, AKIS, financial institutions, and adaptation solution providers to improve the accessibility and usability of climate intelligence. These mechanisms will also support Components 2 and 3 by informing adaptation SME deployment, climate-informed investment assessments, and adaptation finance decision-making.

Output 1.2.3: Research Center for Combating Desertification strengthened to deliver climate risk analytics and decision-support services

The project will strengthen the Research Center for Combating Desertification as a national centre of excellence for applied climate risk analytics, desertification intelligence, and anticipatory adaptation planning through targeted technical assistance, analytical support, equipment, and capacity building. Collaboration between the Center, Uzhydromet, universities, sectoral ministries, and international technical partners will be enhanced to strengthen applied research, forecasting, and climate risk analytics relevant to Uzbekistan's dryland and desertification challenges. The project will also strengthen the Center's capacity to apply Earth Observation data, geospatial analytics, and predictive climate risk modelling for adaptation planning and resilience investments, while exploring partnerships with specialized international organizations to facilitate access to global datasets and technical expertise. By reinforcing the Center's institutional role within Uzbekistan's climate adaptation architecture, the project will strengthen national ownership, sustainability, and the continued provision of climate intelligence services beyond the project lifetime. Any equipment procured under this output will be assigned to and owned by the Research Center for Combating Desertification or the relevant participating national institution in accordance with applicable UNIDO and national asset-management requirements. The recipient institution will assume responsibility for the equipment's operation, routine maintenance, secure use, staffing and integration into its existing analytical functions. The project will not establish a separate project-owned operational system.

During full proposal preparation, an institutional and technical capacity assessment will confirm the proposed equipment package, ownership arrangements, existing infrastructure, qualified personnel, maintenance requirements, expected useful life and recurrent cost implications. Equipment will only be procured where the recipient institution demonstrates that it has, or can establish through project-supported capacity development, the technical and institutional capacity required for its continued operation.

Component 2: Catalytic Support and Deployment of Adaptation Solutions

Baseline situation: A key constraint to scaling climate adaptation solutions in Uzbekistan is the lack of structured support for SMEs transitioning from early-stage innovation to commercial growth. While SMEs have strong potential to deliver locally adapted solutions in areas such as climate-smart agriculture, water management, land restoration, climate information services, and desert economy models, they face significant barriers to accessing finance, demonstrating adaptation impact, and scaling their operations. These challenges are particularly acute for adaptation enterprises, which often operate in high-risk environments, require longer investment horizons, and lack standardized approaches to measuring resilience outcomes. Existing support programmes remain fragmented and rarely combine technical assistance, investment readiness, and performance-based financing tailored to adaptation SMEs.

Proposed interventions: This component will establish a structured national pipeline to identify, strengthen, finance, and scale adaptation SMEs in Uzbekistan through the Catalyzer and Catalyzer Plus approach. Approximately 250–300 SMEs will be engaged through nationwide outreach, from which 40–50 enterprises will receive tailored incubation and acceleration support to strengthen business models, adaptation impact frameworks, environmental and social safeguards, and investment readiness. Around 20 high-potential SMEs will subsequently receive Catalyzer Plus performance-based grants linked to Adaptation Performance Targets (APTs), with indicative grant sizes of USD 35,000–60,000 depending on enterprise maturity, deployment scope, and expected resilience outcomes.

Supported SMEs will deploy and scale solutions in climate-smart agriculture, water efficiency, climate information services, land restoration, and desert economy models in priority climate-vulnerable regions. Close collaboration with communities, local authorities, and end-users will ensure solutions are locally adapted, inclusive, and responsive to climate risks, while environmental and social safeguards will minimize maladaptation. SMEs providing climate information services will be required to use official climate information supplied by Uzhydromet and comply with project-established protocols governing the use, communication and interpretation of meteorological information. SME support will focus on value-added adaptation services rather than the production or issuance of forecasts or warnings. Unlike conventional SME acceleration programmes, support will only be provided to enterprises whose products or services directly reduce climate vulnerability and contribute to measurable adaptation outcomes. Technical assistance, investment readiness support and grant financing will be tailored to adaptation-specific business models and linked to Adaptation

Performance Targets that verify resilience outcomes. For management of the two SME calls, the project will not develop a new stand-alone application platform. It will partner with a qualified entity that already operates an established application-management system and will adapt the existing platform to the specific requirements of the Catalyzer and Catalyzer Plus calls. Adaptations may include eligibility screening, application workflows, evaluation, due diligence, safeguards documentation, milestone tracking and reporting.This approach reduces development, hosting, cybersecurity and maintenance costs and avoids creating a platform that would require a separate post-project institutional or financial commitment. The selected service arrangement will include clear provisions on data ownership, data protection, user access, system availability, technical support, archiving and export or transfer of project records. The component will be executed by UNIDO, working closely with the Entrepreneurship Development Company under the Ministry of Economy and Finance, the Agency for Strategic Reforms, and other partners to support methodology development, SME selection, and investor outreach.

Outcome 2.1: Adaptation SMEs identified, strengthened, and enabled to deliver viable solutions

Output 2.1.1: Adaptation SME pipeline identified through calls for proposals

The project will establish a transparent national pipeline of adaptation SMEs through nationwide outreach and competitive selection. Approximately 250–300 SMEs will be reached through ecosystem engagement, with an estimated 120–150 enterprises expected to apply for support. A comprehensive selection framework incorporating financial, technical, environmental, social, and adaptation-specific criteria will build on the KUAA scorecard and Adaptation Performance Target (APT) methodology, adapted to Uzbekistan's climate risks and market conditions.

Outreach will engage incubators, accelerators, business associations, financial institutions, universities, women entrepreneur networks, local authorities, and community organizations, with particular focus on enterprises operating in Karakalpakstan, Khorezm, the Fergana Valley, and dryland regions, while promoting the participation of women- and youth-led enterprises. Applications will be managed through a digital platform supported by pre-application guidance, awareness sessions, and technical clinics. Selection will follow a transparent multi-stage process, including independent evaluation and expert panel validation, to identify enterprises with strong adaptation potential, implementation capacity, and readiness for scaling.

Output 2.1.2: MSMEs supported through incubation and acceleration programmes

Approximately 40–50 SMEs will receive structured incubation and acceleration support under the Catalyzer window through group training, peer learning, individualized advisory services, and technical mentoring provided by national and international experts. Support will strengthen business planning, financial management, adaptation impact management, environmental and social safeguards, investment readiness, digitalization, market positioning, and deployment planning, while integrating gender-responsive and inclusive business approaches.

SMEs will also strengthen operational systems, partnerships with local stakeholders, and engagement with financial institutions and investors, with particular emphasis on enterprises providing solutions in water efficiency, climate-smart agriculture, land restoration, climate information services, and desert economy development. Where SMEs provide climate information services, these will exclusively use official climate information and forecasts issued by Uzhydromet and will operate under agreed protocols ensuring consistency with national meteorological services. Each participating SME will develop a Grant Investment Plan outlining growth strategies, financing needs, deployment approaches, adaptation outcomes, and implementation milestones, providing the basis for Catalyzer Plus grants and future investment.

Output 2.1.3: Adaptation Performance Targets and investment plans developed

Each supported SME will develop Adaptation Performance Targets (APTs) defining measurable, time-bound resilience outcomes based on enterprise-level theories of change, climate risk analysis, impact pathways, and adaptation indicators. Targets may include improved water-use efficiency, increased adoption of climate-resilient agricultural practices, strengthened resilience of vulnerable communities, reduced exposure to drought and land degradation, or improved access to localized climate information services. APTs will be adapted to local conditions and validated using historical performance, sector benchmarks, and technical assessments.

SMEs will establish monitoring frameworks, reporting systems, and adaptation impact dashboards aligned with project monitoring requirements to demonstrate measurable resilience outcomes and strengthen

investment attractiveness. In parallel, Grant Investment Plans will be refined to align financing strategies with adaptation objectives, deployment milestones, and scaling pathways, strengthening both adaptation impact and long-term commercial viability.

Outcome 2.2: Adaptation solutions financed, deployed, and scaled in vulnerable communities

Output 2.2.1: Performance-based grant mechanism implemented to support adaptation SMEs

The project will implement the Catalyzer Plus performance-based grant mechanism, providing catalytic financing to approximately 20 high-potential adaptation SMEs based on the achievement of predefined Adaptation Performance Targets (APTs). Integrated with technical assistance, enterprise acceleration, safeguards compliance, and adaptation impact verification, grants of USD 35,000–60,000 will support localized deployment of adaptation technologies, pilot implementation, expansion into vulnerable regions, operational scaling, customer adoption, and adaptation impact monitoring.

Each SME will finalize a Grant Investment Plan outlining investments, deployment milestones, financing requirements, and expected adaptation outcomes, forming the basis of grant agreements specifying verification procedures, reporting obligations, safeguards, and disbursement conditions. Grant disbursements will be linked to verified milestones using beneficiary data, operational records, geo-tagged documentation, adaptation indicators, and independent verification where appropriate. The mechanism will reduce deployment risks, reward measurable resilience outcomes, and enable SMEs to scale solutions addressing water scarcity, desertification, salinization, and extreme heat, including climate-smart irrigation, localized climate information services, land restoration, revegetation, and water-efficiency technologies. Lessons from implementation will inform solution refinement, replication, future adaptation investments, and engagement with financial institutions under Component 3.

Output 2.2.2: Adoption of solutions facilitated with safeguards applied

The project will promote the uptake and long-term sustainability of adaptation solutions through awareness campaigns, demonstration activities, user training, technical assistance, and community engagement tailored to local contexts and vulnerable groups. Particular attention will be given to women, youth, smallholder farmers, and underserved communities in climate-vulnerable regions, while demonstration activities and peer learning will strengthen user confidence and capacity to operate and maintain supported technologies.

All activities will be subject to environmental and social safeguards screening and monitoring in accordance with the Adaptation Fund Environmental and Social Policy and national regulations. Risks related to land use, water resources, ecosystems, social inclusion, and maladaptation will be identified and mitigated through appropriate safeguards measures, ensuring that deployed solutions contribute to inclusive, sustainable, and climate-resilient development outcomes.

Component 3: Strengthening the Adaptation Finance Ecosystem

Baseline situation: Financial institutions in Uzbekistan have limited experience with adaptation finance and lack practical tools to assess climate risks and adaptation impacts. As a result, financial products tailored to adaptation remain scarce, limiting access to finance for SMEs seeking to deploy and scale climate adaptation solutions.

Proposed interventions: This component will strengthen Uzbekistan's adaptation finance ecosystem by equipping financial institutions with climate risk assessment tools, adaptation impact methodologies, and targeted capacity building to integrate climate considerations into lending and investment decisions. It will also support the co-design and piloting of innovative financial instruments, including blended finance and risk-sharing mechanisms, linked to the adaptation SME pipeline established under Component 2. Financial institution support will focus exclusively on adaptation finance rather than general green or SME finance. Activities will strengthen the capacity of participating institutions to identify, assess and finance investments that reduce climate risks and enhance resilience, using adaptation-specific risk assessment methodologies, investment criteria and performance metrics. Together, these interventions will create a functioning ecosystem that connects adaptation innovation with finance and supports long-term scaling. The component will be executed by UNIDO in close collaboration with the Central Bank of Uzbekistan, the Ministry of Economy and Finance, and anchor commercial banks, including the National Bank of Uzbekistan, Joint-Stock Commercial Bank "Uzpromstroybank" (UzPSB), and Agrobank. Beyond supporting individual transactions, the component aims to institutionalize adaptation finance within Uzbekistan's financial sector

by embedding climate risk and adaptation considerations into financial products, investment practices, and lending processes, thereby creating sustainable financing pathways beyond the project lifetime.

Outcome 3.1: Financial institutions capacitated to assess and invest in adaptation solutions

Output 3.1.1: Climate risk assessment tools developed and applied

The project will develop and operationalize climate risk assessment tools tailored to the needs of financial institutions in Uzbekistan. The tools will enable financial actors to assess climate risks—including desertification, land degradation, and water stress—and integrate these considerations into lending and investment decisions. Developed in close collaboration with financial institutions, they will be accompanied by technical guidance and training to ensure practical application, improving the assessment of adaptation investments and reducing climate-related investment uncertainty.

Output 3.1.2: Adaptation impact assessment toolkits integrated

The project will introduce adaptation impact assessment toolkits enabling financial institutions to evaluate and communicate the resilience benefits of investments through standardized indicators, methodologies, and reporting frameworks. By integrating resilience outcomes alongside financial returns, these toolkits will promote impact-oriented investment practices, strengthen alignment with international good practice, and improve access to climate finance.

Output 3.1.3: Capacity building programmes delivered

The project will deliver targeted capacity-building programmes covering climate risk analysis, adaptation business models, financial structuring, investment appraisal, and adaptation finance. Through workshops, on-the-job learning, and peer exchange, financial institutions will strengthen their capacity to engage with adaptation markets. Direct interaction with SMEs supported under Component 2 will further improve understanding of adaptation business models, financing needs, and investment opportunities.

Outcome 3.2: Innovative adaptation finance instruments developed, and investment flows increased

Output 3.2.1: Financial instruments co-designed

Building on strengthened institutional capacities, the project will facilitate the co-design and piloting of innovative financial instruments tailored to adaptation investments, including adaptation loans, blended finance structures, and risk-sharing mechanisms that improve SME access to finance. The design process will be participatory, engaging financial institutions, SMEs, and other stakeholders to ensure the instruments respond to market needs and national priorities. Before designing new financial instruments, the project will undertake a market-gap and additionality assessment covering existing EBRD, development-finance and commercial-bank green financing facilities. New instruments will only target adaptation financing barriers not adequately addressed by existing products.

Output 3.2.2: Investment pipeline developed and connected to financing partners

The project will develop a structured investment pipeline of adaptation SMEs and projects and connect them with financial institutions and investors through investment advisory services, matchmaking events, and direct engagement with potential financiers. By strengthening linkages between investment-ready enterprises and financing partners, the project will bridge the gap between innovation and capital, supporting the development of a sustainable adaptation finance market in Uzbekistan.

Component 4: Knowledge, Learning, and Replication of Adaptation Innovation

Baseline situation: While Uzbekistan has made important progress in climate adaptation planning and implementation, lessons and evidence generated through adaptation initiatives are not yet systematically captured, disseminated, or translated into practical guidance for policymakers, financial institutions, SMEs, and local stakeholders. Adaptation projects often operate in isolation, limiting peer learning, cross-sectoral collaboration, and the integration of climate intelligence, adaptation finance, and SME innovation into broader planning and investment processes. At the same time, structured pathways for replicating and scaling successful adaptation solutions, financing models, and resilience approaches remain underdeveloped. Replication mechanisms, investment partnerships, and long-term scaling strategies for adaptation SMEs and localized resilience solutions are therefore limited.

Proposed interventions: This component will strengthen knowledge generation, learning, and replication to accelerate the scaling of adaptation solutions, climate intelligence applications, and adaptation finance models across Uzbekistan. It will establish systems to capture implementation lessons, generate operational

evidence, and disseminate practical methodologies through knowledge products, peer-learning platforms, and stakeholder engagement mechanisms focused on adaptation SMEs, climate intelligence, adaptation finance, and resilience planning.

The component will also develop replication pathways and scaling strategies in partnership with government institutions, financial institutions, development partners, and the private sector, ensuring that successful approaches are integrated into national adaptation processes while contributing to regional and global adaptation innovation networks. Consistent with the Adaptation Fund's innovation learning objectives, the project will document the full range of implementation experience, including approaches that succeed, partially succeed, underperform or are discontinued. Learning will examine not only whether an innovation achieved its intended Adaptation Performance Targets, but also why results differed across technologies, business models, locations and beneficiary groups. This will enable the project to identify technical, financial, institutional, market and social factors that support or constrain adaptation impact. Where necessary, evidence will be anonymized to protect commercially sensitive information while ensuring that lessons from unsuccessful or partially successful approaches remain available to inform future innovation design and investment decisions. Communities and end users will be engaged as knowledge partners rather than only as beneficiaries. Participatory monitoring, user feedback, community reflection sessions and local validation of findings will enable farmers, pastoralists, women, youth, water-user associations and other vulnerable groups to contribute knowledge on the relevance, usability, affordability and local adaptation benefits of supported solutions. Their perspectives will inform project learning, adaptation of interventions and decisions regarding replication. The component will be executed by the National Committee on Ecology and Climate Change, working closely with the National Climate Center under the Committee in line with its mandate for coordination, knowledge management, and support to the Climate Council Secretariat.

Outcome 4.1: Evidence, learning, and adaptation innovation models generated and disseminated

Output 4.1.1: Knowledge products and evidence on adaptation SMEs, climate intelligence applications, and adaptation finance generated and disseminated

The project will generate and disseminate knowledge products documenting lessons learned, practical methodologies, and implementation evidence, including case studies on adaptation SMEs, technical guidance on climate intelligence applications, lessons from performance-based financing, policy briefs, and analytical reports on adaptation finance and resilience deployment models. Developed throughout implementation, these products will translate operational experience into practical guidance for policymakers, financial institutions, SMEs, and development partners, with particular emphasis on scalable approaches for dryland resilience, water management, climate-smart agriculture, and desertification response. Knowledge products will document both positive and negative implementation experience, including achievement and non-achievement of Adaptation Performance Targets, operational constraints, beneficiary uptake, unintended effects, financing barriers and changes made during implementation. Products may include comparative portfolio analyses, learning briefs on underperforming approaches, case studies, technical guidance, policy briefs and analytical reports. Evidence will be presented in a manner that protects commercially sensitive information while allowing other SMEs, institutions and investors to avoid repeating unsuccessful approaches. Dissemination will take place through digital platforms, publications, workshops, and national and regional stakeholder events to strengthen the evidence base for adaptation innovation in Uzbekistan and Central Asia. Knowledge products intended for local beneficiaries will be developed in accessible language and appropriate local languages and formats. These may include illustrated guidance, short practical briefs, radio content, community information materials, demonstration sessions, audio-visual products and facilitated learning events. Where knowledge is generated with communities, findings will be validated locally and shared back with participating groups.

Output 4.1.2: National and regional knowledge-sharing and peer learning platforms supported

The project will establish knowledge-sharing and peer-learning platforms bringing together government institutions, SMEs, financial institutions, research organizations, development partners, and civil society to exchange experience on adaptation innovation. Activities will include adaptation innovation forums, thematic workshops, technical dialogues, investor roundtables, peer-learning exchanges, and digital knowledge platforms covering adaptation finance, climate intelligence, adaptation SME deployment, and resilience measurement. Particular emphasis will be placed on strengthening collaboration between climate intelligence

providers, financial institutions, and adaptation SMEs while contributing lessons and methodologies to Adaptation Fund and UNIDO knowledge networks and other regional adaptation platforms. At sub-national and community levels, peer learning will also be supported through farmer and pastoralist exchanges, community demonstrations, local-language workshops, women's and youth group consultations, field visits and facilitated reflection sessions. Digital dissemination will be complemented by radio, printed and illustrated materials, local extension channels and in-person engagement, particularly in areas with limited internet access or digital literacy. Local authorities, civil society organizations and community-based organizations will support dissemination and ensure accessibility for women, youth, persons with disabilities and other vulnerable groups.

Output 4.1.3: Monitoring, evaluation, and adaptation impact learning systems operationalized

The project will establish an integrated monitoring, evaluation, and adaptation learning system aligned with Adaptation Fund requirements and national monitoring frameworks. The system will track implementation progress, resilience outcomes, beneficiary experience, and Adaptation Performance Targets (APTs) for SMEs, generating evidence on the effectiveness and scalability of climate intelligence, SME-led solutions, and adaptation finance.

Adaptive management will be undertaken during project inception, following the first Catalyzer cohort and Catalyzer Plus grants, and annually thereafter. Monitoring results will inform adjustments to SME selection, APTs, technical assistance, delivery approaches, geographic focus, partnerships, and climate intelligence or financing activities where required.

The PMU will prepare recommendations in consultation with relevant stakeholders. The Project Steering Committee will approve changes within the project scope, while material changes will be submitted by UNIDO for approval in accordance with Adaptation Fund procedures. All decisions will be documented through the project's monitoring and governance systems.

Review point	Main evidence	Potential decisions	Decision authority
Inception review	Validated baselines, stakeholder needs, existing systems and SME market assessment	Refine targets, eligibility criteria, delivery channels and geographic focus	PMU recommendation; PSC approval
First SME portfolio review	Catalyzer participation, APT feasibility, initial grant performance and beneficiary feedback	Revise APTs, TA packages, selection criteria or grant milestones	PMU/technical groups; PSC for material changes
Annual reviews	Component indicators, safeguards, gender, grievances, uptake and financial performance	Adjust annual work plan, partnerships, resource emphasis and implementation methods	PSC

Outcome 4.2: Replication and scaling pathways established for adaptation solutions and financing mechanisms

Output 4.2.1: Replication strategies developed for scalable adaptation SME solutions and climate intelligence applications

The project will develop replication strategies for successful adaptation solutions, climate intelligence applications, and resilience deployment models implemented under the project. Innovations that do not demonstrate sufficient effectiveness, feasibility or demand will not be promoted for replication; however, the reasons for their partial achievement or underperformance will be documented and incorporated into guidance for future programme and investment design. Based on operational performance, cost-effectiveness, institutional feasibility, market demand, and adaptation impact, the strategies will identify opportunities to expand successful approaches across regions, sectors, and beneficiary groups, with particular focus on water management, dryland resilience, climate-smart agriculture, and localized climate advisory services. Developed in collaboration with government institutions, SMEs, financial institutions, and development partners, the strategies will also identify financing pathways and opportunities for integration into national programmes and future adaptation investments.

Output 4.2.2: Partnerships and investment linkages strengthened to support post-project scaling

The project will strengthen strategic partnerships and investment linkages to sustain adaptation SMEs and resilience solutions beyond the project lifetime. Through investor engagement events, matchmaking

sessions, financing dialogues, partnership development, and visibility activities, adaptation SMEs will be connected with financial institutions, investors, development partners, and public sector actors. Particular emphasis will be placed on strengthening long-term collaboration between SMEs and the financial institutions supported under Component 3, ensuring continued adaptation financing beyond project completion.

Output 4.2.3: Lessons and methodologies integrated into national and international adaptation innovation networks

The project will integrate lessons learned, methodologies, and operational experience into national, regional, and international adaptation innovation and resilience networks. Knowledge products, case studies, and technical lessons will be shared through Adaptation Fund innovation networks, UNIDO adaptation initiatives, and regional climate resilience dialogues in Central Asia. Particular emphasis will be placed on documenting experience with adaptation SME acceleration and performance-based financing in Uzbekistan's dryland and desertification context, generating evidence relevant to countries facing similar climate challenges while positioning Uzbekistan as an emerging regional hub for adaptation innovation.

B. Promotion of new and innovative solutions to climate change adaptation

The proposed project promotes innovation in climate adaptation by introducing integrated approaches that address key barriers to adaptation in Uzbekistan. Consistent with the Adaptation Fund's definition of innovation, the project combines existing technologies, institutional arrangements, and financing mechanisms in new ways that are adapted to the national context and designed for replication. The technologies and innovation approaches promoted under the project are consistent with the technology priorities identified through Uzbekistan's Technology Needs Assessment and Technology Action Plan, ensuring that innovation responds to nationally identified adaptation needs and technology gaps. Innovation is delivered across four mutually reinforcing dimensions.

First, the project strengthens climate intelligence by integrating hydrometeorological data, satellite observations, geospatial analytics, and predictive modelling into user-oriented climate services. Rather than creating new monitoring systems, it transforms existing data into localized climate advisories, early warning services, and decision-support tools for farmers, SMEs, financial institutions, communities, and local authorities, supporting anticipatory adaptation.

Second, the project introduces a structured ecosystem for adaptation SMEs. The project builds on methodologies that have already been developed and tested through UNIDO's Adaptation SMEs Innovation Facility (ASIF) and the Kenya–Uganda Adaptation Accelerator (KUAA). These programmes have demonstrated the operational feasibility of structured SME acceleration, adaptation-specific investment readiness, performance-based financing, environmental and social safeguard integration, and the use of Adaptation Performance Targets (APTs) to define and verify resilience outcomes. The proposed project does not replicate these initiatives, but adapts and further develops these proven methodologies for Uzbekistan's climate context, characterized by increasing water scarcity, salinization, desertification and dryland ecosystems. Through the Catalyzer and Catalyzer Plus approach, enterprises will receive technical assistance, investment readiness support, and performance-based financing to develop and scale locally adapted solutions. The project also introduces Adaptation Performance Targets (APTs), providing a standardized methodology to define, measure, and verify enterprise-level adaptation outcomes.

Third, the project pioneers performance-based financing for adaptation SMEs by linking grant disbursements to verified resilience outcomes rather than activities. Combined with the co-development of adaptation finance instruments with financial institutions, this creates incentives for measurable adaptation performance while reducing investment risks.

Finally, the project integrates climate intelligence, SME innovation, adaptation finance, and policy into a single national framework. By embedding project tools and methodologies into national institutions and generating practical evidence for replication, the project establishes a scalable adaptation ecosystem that can inform future investments in Uzbekistan and beyond.

C. Roll-out of successful innovative adaptation practices, tools and technologies

The project is designed to move beyond pilot activities by creating structured pathways to deploy, replicate, and institutionalize successful adaptation solutions. Rather than piloting an entirely new acceleration methodology, the project transfers and scales proven innovation processes—including the Catalyzer/Catalyzer Plus model, Adaptation Performance Targets, and performance-based financing—that

have already been operationalized under previous UNIDO adaptation programmes. Innovation therefore lies in their adaptation to a new institutional, climatic and financial context and in their integration with national climate intelligence systems and adaptation finance mechanisms.

Adaptation SMEs supported through the Catalyzer and Catalyzer Plus pipeline will develop, test, and deploy solutions addressing water scarcity, desertification, land degradation, climate-smart agriculture, and climate information services in priority climate-vulnerable regions. Performance-based grants linked to Adaptation Performance Targets (APTs) will support the expansion of solutions that demonstrate measurable resilience outcomes while generating evidence for future investment.

Scaling will also be supported by strengthening Uzbekistan's adaptation finance ecosystem. Through climate risk assessment tools, adaptation impact methodologies, and innovative financial instruments, the project will improve the ability of financial institutions to finance adaptation beyond the project lifetime. Successful approaches will be institutionalized by integrating climate intelligence tools, adaptation methodologies, and planning approaches into national systems and sector strategies. Knowledge products, monitoring results, and replication strategies will support wider uptake across regions and sectors, while partnerships with government, financial institutions, SMEs, and development partners will facilitate long-term scaling. Through this integrated approach, the project establishes sustainable pathways for scaling adaptation innovation beyond individual pilot interventions.

D. Economic, social, and environmental benefits

The project will generate significant economic, social, and environmental benefits while strengthening resilience in climate-vulnerable regions of Uzbekistan. Economically, the project will strengthen livelihoods by supporting adaptation SMEs that create jobs and deliver locally appropriate solutions such as climate-smart agriculture, water-efficient technologies, climate information services, and land restoration. Improved productivity, reduced climate losses, and enhanced access to adaptation finance will strengthen rural incomes and private sector resilience.

Socially, localized climate information, early warning systems, and capacity-building will improve preparedness and adaptive capacity among vulnerable communities. Particular attention will be given to women, youth, smallholder farmers, and marginalized groups through targeted outreach, inclusive SME support, gender-responsive capacity building, and participatory solution design.

Environmentally, the project will promote sustainable land management, water efficiency, ecosystem restoration, and climate-informed natural resource management. Climate intelligence systems will strengthen evidence-based decision-making while reducing risks of maladaptation.

Environmental and social risks will be managed through a project-level Environmental and Social Management Framework (ESMF) aligned with the Adaptation Fund Environmental and Social Policy and national regulations. All supported activities will undergo safeguards screening, stakeholder consultation, and grievance procedures to identify and mitigate risks related to land, water, ecosystems, social inclusion, and maladaptation.

Gender equality will be mainstreamed across all components through gender-responsive design, participation targets, gender-disaggregated monitoring, and measures supporting women-led enterprises and women's participation in adaptation decision-making.

E. Cost-effectiveness analysis

The proposed project has been designed to maximize cost-effectiveness by addressing systemic barriers to climate adaptation in Uzbekistan through integrated interventions that generate reinforcing benefits across climate intelligence, SME development, adaptation finance, and institutional strengthening. Rather than financing isolated infrastructure investments or stand-alone pilot activities, the project focuses on building national systems and market mechanisms capable of sustaining and scaling adaptation action beyond the project duration.

During concept preparation, several alternative intervention approaches were considered, including stand-alone public infrastructure investments, fully government-led adaptation service delivery models, and conventional grant financing mechanisms targeting a limited number of beneficiaries or pilot sites. These alternatives were assessed against criteria including scalability, sustainability, cost per beneficiary, institutional ownership, private sector leverage, and long-term adaptation impact. The selected project approach — combining climate intelligence, SME acceleration, performance-based financing, and adaptation

finance ecosystem strengthening — was chosen because it enables adaptation solutions to be deployed through market actors capable of reaching multiple communities and sectors while simultaneously strengthening national systems and local institutional capacities. Compared to infrastructure-heavy or fully subsidy-based approaches, the project is expected to achieve broader geographic replication, lower long-term public financing dependency, and stronger sustainability beyond the project lifetime.

The project adopts a targeted geographic approach focused on highly climate-vulnerable regions including Karakalpakstan, Khorezm, selected areas of the Fergana Valley, and dryland regions affected by desertification, water stress, salinization, and increasing climate variability. By concentrating investments in regions with high climate vulnerability and strong demand for adaptation solutions, the project maximizes resilience benefits relative to investment costs while generating lessons and models that can be replicated nationally.

A key element of cost-effectiveness lies in the project's emphasis on strengthening and leveraging existing national structures rather than creating parallel systems. Under Component 1, investments in climate intelligence build directly on the capacities and infrastructure of Uzhydromet and the Research Center for Combating Desertification, improving data integration, localized climate analytics, and user-oriented climate services without duplicating ongoing national early warning investments. Coordination with ongoing initiatives such as GCF SAP022 and the IFAD-supported Adaptation Fund project on climate services for agriculture further reduces duplication risks and allows the project to focus on downstream application, localization, and deployment of climate information for SMEs and vulnerable communities.

The project further improves cost-effectiveness through its enterprise multiplier model. Rather than directly implementing adaptation interventions itself, the project will support approximately 40-50 adaptation SMEs through incubation and acceleration services and provide Catalyzer Plus performance-based grants to around 20 high-potential enterprises. These SMEs are expected to deploy solutions across multiple communities, value chains, and regions, creating broader adaptation reach than would be possible through direct project-led implementation alone.

In contrast to direct implementation models, which typically require continuous project management, procurement, and operational involvement for each intervention site, the SME-led approach allows adaptation solutions to be deployed through commercially viable enterprises with incentives to continue operations after project completion. This significantly reduces long-term public implementation costs while increasing the potential for replication and market expansion. The approach also diversifies implementation risk across multiple enterprises, sectors, and regions, reducing dependence on a small number of large investments or centralized delivery mechanisms.

Indicative grant sizes ranging from approximately USD 35,000 to USD 60,000 have been calibrated to the Uzbekistan market context and are designed to provide sufficient catalytic financing for deployment and scaling while maximizing the number of enterprises supported. This approach enables the project to diversify adaptation investments across sectors and regions while reducing concentration risk and strengthening ecosystem-wide learning. By supporting a portfolio of SMEs rather than a limited number of large investments, the project enhances replication potential and increases the likelihood of sustained market transformation.

The project is expected to engage approximately 250-300 SMEs through outreach and ecosystem engagement activities, support around 40-50 enterprises through the Catalyzer acceleration window, and finance approximately 20 SMEs through Catalyzer Plus grants. This pipeline approach significantly reduces transaction costs associated with identifying and preparing adaptation investment opportunities and creates a structured pathway from enterprise acceleration to deployment and financing.

The introduction of Adaptation Performance Targets (APTs) and performance-based grant financing further strengthens cost-effectiveness by linking financial disbursements to verified resilience outcomes. Grant payments will only be released upon achievement of predefined milestones supported by evidence such as beneficiary data, operational records, adaptation indicators, geo-tagged documentation, or independent verification. This results-based approach reduces inefficient spending and ensures that public resources are directed toward enterprises capable of delivering measurable adaptation benefits in vulnerable communities.

Compared to conventional upfront grant disbursement models, the use of Adaptation Performance Targets (APTs) increases accountability and improves value for money by linking financing to verified adaptation

outcomes rather than planned activities alone. This approach reduces the risk of underperforming investments and encourages enterprises to prioritize effective deployment, beneficiary reach, and operational sustainability.

The project also prioritizes catalytic investments capable of mobilizing additional finance beyond the Adaptation Fund contribution. Through Component 3, the project will strengthen the capacity of financial institutions, facilitate adaptation finance partnerships, and generate market evidence on SME adaptation performance and financing needs. By improving investment readiness and adaptation impact measurement, the project is expected to increase the ability of supported SMEs to access commercial finance and blended financing opportunities beyond the project lifecycle.

Cost-effectiveness is further enhanced through the use of standardized methodologies, digital platforms, and scalable tools. Climate risk assessment methodologies, adaptation performance frameworks, safeguards procedures, and SME support tools developed under the project will be designed for replication and reuse across sectors and regions. Digital platforms will support SME application management, climate information dissemination, monitoring, and knowledge sharing, reducing administrative and operational costs while increasing accessibility for enterprises and communities in remote areas. To avoid reinforcing digital exclusion, digital delivery mechanisms will be complemented by in-person outreach, regional workshops, local partner networks, offline application support, and non-digital communication channels where necessary. The project will prioritize accessibility for women-led enterprises, rural SMEs, and vulnerable communities with limited digital connectivity or technical capacity.

The project's emphasis on institutional strengthening and local ownership also contributes to long-term efficiency. By strengthening national institutions, local SMEs, financial actors, and regional stakeholders, the project reduces dependency on long-term external technical assistance and creates sustainable national capacities for adaptation planning, financing, and implementation. The project will prioritize the use of nationally owned systems, open-access methodologies where feasible, and local institutional capacity development in order to reduce dependency on external technology providers and ensure long-term national ownership of climate intelligence and adaptation planning systems. Investments in institutional systems and local enterprise ecosystems are expected to continue generating resilience benefits after project completion without requiring proportional future public investment.

The project is expected to directly benefit approximately 15,000 people, including farmers, rural households, women entrepreneurs, SME employees, and vulnerable communities, while indirectly benefiting more than 75,000 people through improved climate information systems, adaptation services, enterprise deployment, and ecosystem strengthening. Given the project's expected direct and indirect reach, the integrated SME deployment model is expected to generate adaptation benefits at lower per-beneficiary cost than traditional site-specific infrastructure interventions that typically require high capital expenditure and ongoing public maintenance.

Overall, the project achieves cost-effectiveness through a combination of targeted geographic prioritization, leveraging of existing national systems, SME-driven deployment models, results-based financing, institutional strengthening, and replication-oriented design. Compared to traditional infrastructure-focused adaptation projects or isolated pilot interventions, the project is designed to achieve broader adaptation reach, stronger private sector leverage, lower long-term public financing dependency, and higher replication potential per dollar invested. The integrated project design also enables adaptation benefits to extend beyond individual enterprises by strengthening climate information systems, adaptation finance capacity, and institutional coordination mechanisms that support wider ecosystem resilience and long-term adaptive capacity. By enabling anticipatory action rather than post-disaster response, climate intelligence systems reduce adaptation costs and avoid economic losses, thereby increasing the resilience benefits generated per dollar invested.

Table 3: Comparative assessment of alternative adaptation delivery approaches considered during project preparation

Approach considered	Strengths	Limitations	Rationale for selected project approach
Stand-alone public infrastructure investments	Can provide localized physical protection benefits	High capital and maintenance costs; limited flexibility and replication potential; weaker private sector engagement	The project prioritizes modular SME-led adaptation solutions and climate intelligence systems that can be scaled across multiple regions and sectors with lower long-term public financing dependency

Approach considered	Strengths	Limitations	Rationale for selected project approach
Fully government-led adaptation service delivery	Strong alignment with public mandates and national systems	Limited implementation capacity and slower deployment; risks of long-term dependency on public financing	The project combines institutional strengthening with private sector deployment models to improve scalability, innovation uptake, and sustainability
Conventional upfront grant financing	Faster disbursement and lower administrative complexity	Higher risk of inefficient spending and weak accountability for adaptation outcomes	The project uses Adaptation Performance Targets (APTs) and performance-based financing to improve accountability and value for money
Isolated pilot projects	Can demonstrate proof of concept in specific locations	Limited systemic impact and low replication potential	The project integrates climate intelligence, SME support, and adaptation finance ecosystem strengthening to enable broader market transformation and replication

F. Consistence with national/ sub-national sustainable development strategies

The proposed project is fully aligned with Uzbekistan's national development priorities, climate strategies, and sectoral policies, and directly supports the country's efforts to strengthen resilience to climate change, particularly in the context of increasing desertification, water stress, and land degradation. By addressing key adaptation challenges through an integrated approach combining climate intelligence, private sector engagement, finance, and policy integration, the project contributes to the achievement of national objectives related to sustainable development, climate resilience, and economic diversification.

The project is closely aligned with Uzbekistan's Updated Nationally Determined Contribution of Uzbekistan, submitted under the UNFCCC. The NDC identifies adaptation as a national priority and highlights key vulnerabilities in water resources, agriculture, and ecosystems, particularly in arid regions. It emphasizes the need to strengthen hydrometeorological services, expand early warning systems, improve water efficiency, and enhance resilience in agriculture. The proposed project directly contributes to these priorities through the development of a national climate intelligence platform, deployment of early warning systems, and support to adaptation SMEs delivering solutions in climate-sensitive sectors.

The project also directly supports Uzbekistan's ongoing National Adaptation Plan of Uzbekistan, which aims to integrate climate adaptation into national and sectoral planning processes. The NAP process prioritizes strengthening institutional capacity, improving climate data and risk assessments, and enhancing coordination across sectors. By embedding climate intelligence systems, adaptation tools, and monitoring frameworks into national planning processes, the project contributes to the institutionalization of adaptation and supports the operationalization of the NAP. Its multi-stakeholder and participatory approach further aligns with the NAP's emphasis on inclusive and coordinated adaptation planning.

The project is also aligned with Uzbekistan's Technology Needs Assessment (TNA) and the associated Technology Action Plan (TAP), prepared under the UNFCCC Technology Mechanism. The TNA/TAP identifies climate-resilient agriculture, sustainable water management, climate information systems, environmental monitoring, and innovative technologies that strengthen resilience to drought, land degradation and water scarcity as national priorities. The proposed project directly contributes to these priorities by supporting the deployment of climate intelligence systems, digital decision-support tools, climate-resilient technologies through adaptation SMEs, and strengthened enabling conditions for technology uptake, investment and scaling. Through its focus on innovation, technology diffusion and private sector engagement, the project contributes to the implementation of the Technology Action Plan while accelerating the adoption of adaptation technologies identified as national priorities.

In addition, the project is consistent with Uzbekistan's long-term development vision as outlined in the Strategy for the Transition of the Republic of Uzbekistan to a Green Economy 2019-2030. This strategy prioritizes sustainable use of natural resources, climate-resilient agriculture, energy and water efficiency, and environmental protection. The project contributes directly to these objectives by promoting climate-smart technologies, improving water use efficiency, and supporting sustainable land management practices, particularly in areas affected by desertification.

The project also aligns with the Development Strategy of New Uzbekistan for 2022-2026, which emphasizes environmental sustainability, rural development, private sector growth, and innovation. By supporting SMEs, fostering innovation ecosystems, and strengthening climate resilience in rural areas, the project contributes

to key priorities under this national development framework, including job creation, economic diversification, and improved living conditions in vulnerable regions.

At the sectoral level, the project is consistent with national strategies and programmes in agriculture and water management, including the Agriculture Development Strategy of the Republic of Uzbekistan 2020-2030, which prioritizes climate resilience, efficient water use, and modernization of agricultural practices. The deployment of adaptation solutions such as climate-smart agriculture technologies and water-efficient systems directly supports these objectives. Similarly, the project contributes to national priorities in water resource management, including improving irrigation efficiency and addressing water scarcity, which are critical challenges identified across multiple national strategies.

The project is also aligned with Uzbekistan's commitments under the UN Convention to Combat Desertification (UNCCD) National Action Programme, which focuses on combating land degradation and promoting sustainable land management. By supporting desertification monitoring, forecasting, and the deployment of land restoration solutions, the project contributes directly to these commitments and strengthens national capacity to address land degradation challenges.

At the sub-national level, the project targets regions that are particularly vulnerable to climate change, including areas affected by the Aral Sea crisis and increasing desertification. The project's participatory approach ensures alignment with local development priorities by engaging regional authorities, local communities, and civil society organizations in the design and implementation of activities. This enhances the relevance and effectiveness of interventions and supports the integration of adaptation into sub-national planning processes.

Furthermore, the project is designed to complement and build on existing initiatives supported by development partners, including programmes implemented by organizations such as UNDP, World Bank, and FAO in areas such as climate resilience, sustainable land management, and water resource efficiency. By leveraging existing knowledge, infrastructure, and institutional frameworks, the project avoids duplication and enhances synergies with ongoing efforts.

The project is also fully aligned with the United Nations Sustainable Development Cooperation Framework (UNSDCF) for Uzbekistan 2026–2030, to which UNIDO is a signatory and contributing agency. In particular, the project contributes directly to Outcome 5, which aims to ensure that all people in Uzbekistan benefit from sustainable and accountable management of natural and cultural resources, strengthened climate resilience, improved food systems and water security, and green and just transitions. It also supports Outcome 6, which seeks to enhance socio-economic well-being, equitable access to services, and climate and environmental resilience for the people of the Aral Sea Region. Through investments in climate intelligence, adaptation finance, SME-led adaptation solutions, and strengthened institutional capacities, the project contributes to the achievement of both outcomes while supporting the broader UN development agenda in Uzbekistan.

Overall, the project is fully consistent with Uzbekistan's national and sub-national strategies and contributes directly to the implementation of key policy objectives related to climate resilience, sustainable development, and environmental sustainability. By aligning with these frameworks and strengthening their implementation, the project ensures both relevance and long-term sustainability, while supporting Uzbekistan's transition toward a more climate-resilient and resource-efficient economy.

G. Relevant national technical standards

The proposed project is designed to fully comply with applicable national technical standards and regulatory frameworks in Uzbekistan, while also adhering to the Environmental and Social Policy (ESP) of the Adaptation Fund. The project adopts a comprehensive and proactive approach to environmental and social risk management, ensuring that all activities are implemented in accordance with national legislation, international good practices, and the principles of sustainable and inclusive development.

All project activities will be implemented in alignment with Uzbekistan's national regulatory framework governing environmental protection, land use, construction, and natural resource management. This includes compliance with environmental assessment procedures established under the Law on Environmental Protection and the Law on Environmental Expertise, which require environmental impact assessments (EIA) for projects that may have significant environmental implications. Where applicable, project-supported interventions—particularly those involving infrastructure or technology deployment—will undergo

environmental screening and, if required, formal environmental review processes in accordance with national requirements.

In the context of water and land-related interventions, the project will comply with relevant provisions under the Land Code of the Republic of Uzbekistan and Water Code of the Republic of Uzbekistan, ensuring sustainable use of natural resources and prevention of environmental degradation. Any activities involving irrigation systems, land restoration, or water-efficient technologies will be aligned with national standards for water management, soil protection, and ecosystem conservation.

Where physical infrastructure or equipment installation is involved—such as monitoring stations or early warning system components—the project will ensure compliance with national construction norms and standards, including applicable building codes and safety regulations. Technical specifications will follow established standards to ensure safety, durability, and resilience to climate risks. Furthermore, digital systems developed under the project, including the climate intelligence platform, will adhere to national standards related to data management, interoperability, and cybersecurity, ensuring that systems are robust, secure, and compatible with existing government infrastructure. Any project-supported digital climate services will be designed to ensure consistency with the legal mandate of Uzhydromet as Uzbekistan's authoritative provider of meteorological forecasts and warnings. Appropriate governance arrangements, data access protocols and quality assurance procedures will be established to ensure that downstream advisory services use only validated official information and avoid conflicting messages to end users. The project will also comply with the national legal and institutional framework governing hydrometeorological and climate services, such as the Law No. ZRU-745 on hydrometeorological activities[15]. Uzhydromet will remain the national authority responsible for the generation and issuance of official meteorological observations, forecasts and warnings in accordance with its legal mandate. Project-supported climate information services developed by SMEs or other partners will not generate independent forecasts or issue official warnings. Instead, they will use authoritative climate information provided by Uzhydromet to develop value-added decision-support applications, sector-specific advisory services and adaptation guidance tailored to the needs of farmers, communities, enterprises and financial institutions. Appropriate institutional arrangements, data-sharing agreements and quality assurance procedures will ensure consistency of information provided to end users and prevent conflicting or duplicative messaging. In addition to national requirements, the project will fully comply with the Adaptation Fund Environmental and Social Policy, which outlines 15 key principles, including access and equity, marginalized and vulnerable groups, human rights, gender equality, environmental protection, and avoidance of adverse impacts.

To operationalize these principles, the project will establish and implement a project-level Environmental and Social Management Framework (ESMF). This system will guide the identification, assessment, and management of environmental and social risks across all project components, with particular attention to activities implemented by SMEs under Component 2.

All sub-projects and SME-supported interventions will undergo a structured environmental and social screening process to identify potential risks and classify activities according to risk levels. Based on this screening, appropriate mitigation measures will be developed and implemented. Activities with high environmental or social risks will either be redesigned to reduce risks or excluded from support, in line with AF requirements.

The ESMF will specifically address key risk areas relevant to the project context, including:

- potential impacts on land and water resources
- risks of ecosystem degradation or biodiversity loss
- unintended consequences of technology deployment
- social risks related to access, equity, and inclusion

Particular attention will be given to avoiding maladaptation, ensuring that supported solutions do not create new vulnerabilities, shift risks to other groups, or undermine long-term resilience. This includes assessing trade-offs between short-term benefits and long-term sustainability, as well as ensuring that interventions are context-specific and environmentally sound.

[15] Law No. ZRU-745 on hydrometeorological activities. | UNEP Law and Environment Assistance Platform

The project will support the development and adoption of interoperable data standards, institutional data-sharing protocols and governance arrangements consistent with national digital governance frameworks to facilitate routine exchange of climate information among participating institutions.

Monitoring, Compliance, and Accountability

The project will establish robust monitoring and reporting mechanisms to ensure ongoing compliance with both national standards and the AF Environmental and Social Policy. Environmental and social performance will be tracked throughout implementation, including through regular reporting by SMEs and verification by the project management unit.

A grievance redress mechanism will be established to allow stakeholders, including local communities and project beneficiaries, to raise concerns or complaints related to project activities. This mechanism will be accessible, transparent, and responsive, ensuring that issues are addressed in a timely and effective manner. In addition, stakeholder engagement will be an integral part of project implementation, ensuring that affected communities are informed, consulted, and able to participate in decision-making processes. Information disclosure will be carried out in line with AF requirements, ensuring transparency and accountability.

Compliance with national standards and the AF ESP is embedded across all project components. Under Component 2, environmental and social safeguards will be integrated into the selection and support of SMEs, including through screening criteria and ongoing monitoring. Under Component 1, the development of climate intelligence systems will support improved environmental management and risk-informed decision-making. Under Component 4, the integration of monitoring and evaluation systems into national frameworks will further strengthen compliance and institutional capacity for environmental and social risk management.

Unidentified Sub-project (USP) approach

Given that the SMEs, implementation sites and grant-supported activities will only be identified through competitive calls during implementation, the project will apply an Environmental and Social Management Framework (ESMF) consistent with UNIDO's Environmental and Social Safeguards Policy All sub-projects will undergo environmental and social screening prior to approval. Activities classified as Category A or otherwise inconsistent with the Adaptation Fund Environmental and Social Policy, national legislation or the project exclusion list will not be eligible for support. Screening, approval, monitoring and reporting arrangements will be detailed in the full proposal.

H. Duplication of project with other funding sources

The proposed project has been designed to avoid duplication with ongoing and recently approved initiatives in Uzbekistan, Central Asia, and the global adaptation innovation ecosystem. To operationalize complementarity, a detailed programme and financing landscape assessment will be completed during full proposal preparation and updated at inception. For each closely related initiative, the assessment will identify geographic and beneficiary coverage, existing technical systems and platforms, eligible technologies, financing products, responsible institutions and remaining adaptation gaps. Activities under Components 1–3 will only proceed after confirming that they address an identified gap or add a distinct downstream function. The National Committee on Ecology and Climate Change, supported by UNIDO, will maintain a coordination matrix and convene targeted technical meetings with the responsible agencies and development partners. Coordination with the AF/IFAD climate-services project, EBRD/FAO investment-roadmap initiative and EBRD GEFF will be prioritized before finalization of technical specifications, SME selection criteria and adaptation-finance instruments.

Other currently ongoing / relevant projects	Summary of project	Complementarity and synergies with the proposed Uzbekistan project
Adaptation SMEs Innovation Facility (ASIF), Adaptation Fund / UNIDO, 2023-2027	ASIF is a USD 10 million global Adaptation Fund project implemented by UNIDO and BFA Global. It supports adaptation SMEs through technical assistance, grant finance, safeguards, and knowledge-sharing mechanisms. (Adaptation Fund)	ASIF is highly complementary but global in scope. It focuses on early-stage and frontier adaptation SMEs, whereas the Uzbekistan project will establish a **national pipeline** and support adaptation SMEs to deploy and scale solutions in Uzbekistan. The Uzbekistan project can draw on ASIF methodologies, safeguards, SME selection approaches, and impact measurement lessons, while adding country-specific climate intelligence, desertification forecasting, and national financial institution engagement. Early implementation has demonstrated the operational feasibility of the Catalyzer/Catalyzer Plus approach, Adaptation Performance Targets, and performance-based grants, providing the methodological basis for adaptation to Uzbekistan.
Unlocking Investments in Gender and Youth-Inclusive Early-Growth Stage Adaptation SMEs in Kenya and Uganda (KUAA), Adaptation Fund / UNIDO	KUAA is a USD 5 million Adaptation Fund large innovation project focused on early-growth adaptation SMEs in Kenya and Uganda. It addresses the “missing middle” finance gap through performance-based grants, business advisory support, and financial institution capacity building. (Adaptation Fund)	KUAA is the closest methodological reference for the Uzbekistan project, but there is no geographic or beneficiary overlap. The proposed Uzbekistan project adapts the KUAA model to a national Central Asian context, with a stronger focus on climate intelligence, early warning, desertification, and dryland resilience. It can directly build on KUAA’s scorecard, Catalyzer/Catalyzer Plus logic, Adaptation Performance Targets, ESMS approach, and financial institution engagement model. ASIF has validated key methodologies for adaptation SME screening, safeguards integration, investment readiness support, and adaptation impact management that will be further adapted under this project.
Climate Adaptation Innovation and Learning (CAIL), GEF / UNIDO	CAIL is a UNIDO-led knowledge and learning platform financed by GEF. It accelerates private sector engagement in climate adaptation through communities of practice on MSME incubation and acceleration, investment funds, and adaptation impact measurement. (unido.org)	CAIL is a knowledge and learning initiative, not a country implementation project. The Uzbekistan project can contribute lessons from a Central Asian adaptation SME and finance ecosystem to CAIL and use CAIL tools, communities of practice, and learning products to strengthen its own knowledge management. There is no duplication because CAIL does not provide direct national SME financing or deploy adaptation solutions in Uzbekistan.
Programme for Innovation in Climate Adaptation and Resilience Building Solutions (PARS), GEF / UNIDO	PARS is a UNIDO-GEF programme approved under the LDCF that promotes MSME-led adaptation and resilience solutions in LDCs, with global coordination and country projects in selected LDCs. (unido.org)	PARS is conceptually complementary because it supports MSME-led adaptation, but Uzbekistan is not among the PARS LDC country projects. The Uzbekistan project can use PARS tools on MSME acceleration, adaptation impact, and finance ecosystem development, while applying them to Uzbekistan’s dryland, water stress, and desertification context.
Applying remote sensing and geographical information systems for the Aral Sea ecosystem restoration and industrial revitalization, Russian Federation/ UNIDO	The project establishes a national Situational and Data Analytics Center to support ecosystem restoration and economic revitalization in the Aral Sea region through the application of remote sensing, GIS, drones, satellite imagery, data analytics and AI. It aims to strengthen environmental monitoring, afforestation planning, climate-related data management, and national capacities for geospatial intelligence and digital decision-support systems. The project also supports capacity building in data science and promotes the use of digital	This project is highly complementary to Component 1 (Climate Intelligence and Early Warning Systems) of the proposed Adaptation Fund project. The GIS, remote sensing, and environmental monitoring infrastructure developed under the UNIDO project can provide important data inputs for localized climate risk assessments, drought monitoring, desertification forecasting, and adaptation decision-support tools. The proposed project would build upon these digital monitoring capacities by translating climate information into actionable adaptation planning, SME deployment opportunities, community-level resilience measures, and adaptation finance mechanisms. The Adaptation Fund project would also expand the geographic and sectoral application of climate intelligence beyond ecosystem restoration to include adaptation SMEs, financial institutions, climate risk screening, and performance-based adaptation investments. Coordination between the two projects would ensure interoperability of data platforms, shared methodologies for climate risk analysis, and efficient use of national climate information systems, while avoiding duplication of investments in geospatial infrastructure.

Other currently ongoing / relevant projects	Summary of project	Complementarity and synergies with the proposed Uzbekistan project
	technologies for sustainable land management and industrial development.	
Adaptation Fund Climate Innovation Accelerator / ISGAP	AFCIA/ISGAP supports innovative adaptation practices, tools, and technologies, often through small grants and aggregator models. The Adaptation Fund lists AFCIA-related global innovation programming as part of its innovation portfolio. (Adaptation Fund)	The proposed project complements AFCIA by moving beyond small-scale innovation support toward country-level scaling, investment readiness, and financial institution engagement. Lessons from AFCIA grantees may inform eligible technologies and approaches, but the Uzbekistan project will focus on a national pipeline and project-level performance-based grants linked to APTs.
Climate Adaptation and Mitigation Program for the Aral Sea Basin (CAMP4ASB), World Bank / GCF	CAMP4ASB supports adaptation and mitigation in the Aral Sea Basin, initially in Tajikistan and Uzbekistan. GCF financing supports climate-smart rural production and landscape management investments through a regional climate investment facility. (greenclimate.fund)	CAMP4ASB provides an important foundation on climate-smart rural production and landscape management. The Uzbekistan project will not duplicate this investment approach; instead, it will focus on climate intelligence, adaptation SMEs, performance-based support, and finance ecosystem development. Synergies can be explored through climate data, lessons on rural investments, and potential SME-relevant adaptation technologies.
GCF SAP022: Enhancing Multi-Hazard Early Warning System to Increase Resilience of Uzbekistan Communities to Climate Change-Induced Hazards, UNDP / Uzhydromet	SAP022 modernizes Uzbekistan's early warning system into an impact-based multi-hazard early warning system, improving monitoring networks, risk information, and lead time for disaster response. (greenclimate.fund)	This is directly relevant to Component 1. Coordination with GCF SAP022 and Uzhydromet will focus on interoperability between national early warning investments and the project's localized climate intelligence and SME deployment activities. The project will avoid duplication of hydrometeorological infrastructure investments and instead focus on downstream application of climate intelligence, including adaptation advisory services, SME deployment models, and user-oriented decision-support tools. The proposed project adds a private-sector and innovation layer that SAP022 does not primarily cover.
Adaptation planning support for Uzbekistan through UNDP, GCF Readiness	This GCF readiness project supports Uzbekistan to integrate climate adaptation requirements into development planning and processes. (greenclimate.fund)	This supports national adaptation planning and institutional readiness. The proposed project complements it by operationalizing adaptation planning through concrete tools, SME deployment, performance-based financing, and integration of project-developed systems into national planning processes.
Resilient Food Systems Through Climate Services for Agriculture in Uzbekistan, Adaptation Fund / IFAD	This USD 10 million Adaptation Fund project supports climate services for agriculture in Uzbekistan, aiming to improve resilience, incomes, and economic growth in rural farming communities. It includes a near real-time farm advisory information system and climate change modelling for agriculture. (Adaptation Fund)	This project is the closest ongoing initiative to Component 1 and will be treated as the principal reference architecture for agriculture-focused climate advisory services. The proposed project will not develop a parallel near-real-time farm advisory information system or duplicate climate modelling and farmer advisory functions financed under the AF/IFAD project. Instead, it will use relevant data products, standards and dissemination channels developed through the AF/IFAD initiative and focus on complementary downstream functions: integrating agricultural climate information with desertification, salinity, land degradation and water-stress analytics; translating official climate information into decision-support applications for SMEs, local authorities and financial institutions; and supporting adaptation enterprises that provide technologies and services responding to identified climate risks. Coordination will be formalized during project preparation through a technical coordination arrangement led by the National Committee on Ecology and Climate Change, with participation of Uzhydromet, IFAD's implementing partners and UNIDO. The arrangement will define system boundaries, data-exchange protocols, geographic coverage, user groups, interoperability requirements and responsibilities for maintaining climate advisory services. A joint technical review will be undertaken during full proposal preparation and updated at inception before any climate advisory or digital service is procured or developed. Uzhydromet will ensure consistency with the national climate-services architecture and the authoritative use of forecasts and warnings.
Developing Climate Resilience of Farming Communities in Drought-Prone Parts of Uzbekistan, Adaptation Fund / UNDP / Uzhydromet	This Adaptation Fund project focused on drought-prone Karakalpakstan, supporting drought management and early warning, climate-resilient farming practices, soil conservation, moisture retention, and knowledge on resilient agriculture and pastoral systems. (Adaptation Fund)	The completed project has informed the proposed design in three principal areas. First, its experience in drought-prone Karakalpakstan confirms the importance of combining climate information with practical response measures rather than treating early warning as a stand-alone activity. This is reflected in Component 1, where climate advisories are linked to irrigation, crop, livestock, land-management and preparedness decisions. Second, its work on resilient farming, soil conservation and moisture management has informed the indicative SME solution areas under Component 2. Third, its experience highlights the need for sustained institutional ownership, accessible last-mile communication and maintenance of climate-service capacities beyond project closure; these considerations are reflected in the project's emphasis on existing national systems, offline dissemination channels, institutional protocols and local capacity building.

Other currently ongoing / relevant projects	Summary of project	Complementarity and synergies with the proposed Uzbekistan project
		During full proposal preparation, UNIDO and the National Committee will review the project's terminal evaluation, completion documentation and relevant Uzhydromet/UNDP implementation records to identify specific technical results, adoption barriers and implementation difficulties. These lessons will be documented in the full proposal and used to refine regional targeting, beneficiary engagement, climate advisory delivery and sustainability arrangements in Karakalpakstan.
Climate Adaptive Water Resources Management in the Aral Sea Basin Sector Project, ADB	ADB's project supports climate-adaptive water resources management in Uzbekistan, with ongoing implementation and significant investment in agriculture and irrigation/water systems. CAREC lists the project as ongoing, approved in 2022 with expected completion in 2030 and USD 153 million in ADB funding. (ADB)	This project focuses on water infrastructure and basin-level water resources management. The Uzbekistan project complements it by supporting climate intelligence tools, SME-led water efficiency solutions, and adaptation finance products. SMEs supported under Component 2 could offer technologies and services relevant to water efficiency, but the project will not duplicate large-scale irrigation infrastructure investments.
Climate risk analysis and prioritisation of adaptation measures for the Amu Darya River Basin, ADB TA / FutureWater	This technical assistance assessed climate risks in the Amu Darya River Basin and identified climate-resilient investment measures through participatory prioritization. (futurewater.nl)	This analytical work can inform the proposed project's targeting, risk assessment, and adaptation solution selection. The proposed project would not duplicate the analysis but could use its findings to guide SME eligibility criteria, climate intelligence priorities, and regional targeting.
Central Asia Hydrometeorology Modernization Project (CAHMP) and proposed CAHMP II, World Bank / GFDRR / WMO	CAHMP aimed to improve the accuracy and timeliness of hydromet services in Central Asia; GFDRR notes the project strengthened hydromet capacity, and WMO/World Bank cooperation has continued toward enhanced regional hydrometeorological services. (gfdrr.org)	The proposed project should build on CAHMP/CAHMP II by using improved hydromet capacities as inputs for localized climate intelligence and early warning tools. It adds value by linking climate services to SME innovation, investment decisions, and community-level adaptation action.
Uzbekistan National Framework for Hydrometeorological and Climate Services, UNDP / Uzhydromet	Uzbekistan developed its first National Framework for Hydrometeorological and Climate Services to improve data access, modernize monitoring infrastructure, and enhance information sharing. (adaptation-undp.org)	This is highly complementary to Component 1. The proposed project can support operationalization through user-oriented tools, data-sharing protocols, and linkages to adaptation SMEs and finance. It should align platform design and protocols with this framework.
Climate Change and Resilience in Central Asia, UNDP	This project supports climate-resilient development in the Ferghana Valley, a transboundary area of Kyrgyzstan, Tajikistan, and Uzbekistan. It focuses on climate-fragility risk knowledge, risk-informed policymaking, transboundary resource management, and practical risk reduction interventions. (UNDP)	The proposed Uzbekistan project is national and SME/finance-oriented, while this UNDP initiative is transboundary and climate-fragility focused. Synergies include local risk knowledge, participatory planning approaches, and potential climate intelligence applications in Ferghana Valley regions.
GEF-UNDP-UNESCO project on cryosphere and climate challenges in Uzbekistan / Central Asia	UNESCO reported in January 2025 that a GEF-UNDP-UNESCO project aims to strengthen adaptation capacity of Central Asian countries to climate change impacts on the cryosphere. (UNESCO)	This initiative addresses mountain and cryosphere-related climate risks, whereas the proposed project focuses more broadly on climate intelligence, dryland risks, desertification, SME solutions, and finance. Complementarity could include data exchange and integration of cryosphere-related risk information into the national climate intelligence platform.
GCF FP283: Glaciers to Farms Regional Program	GCF's Glaciers to Farms programme includes climate-informed planning tools, development of bankable adaptation projects, financing approaches such as outcome-based resilience bonds, climate budgeting and screening tools, agriculture enterprise mentoring, and cross-border pilots. (greenclimate.fund)	This is highly relevant at regional level. The proposed Uzbekistan project should coordinate to avoid overlap in enterprise mentoring and adaptation finance innovation. Its differentiation lies in being a national project focused on Uzbekistan's adaptation SMEs, desertification, early warning, and performance-based grant support. Potential synergies include climate finance tools, bankable project preparation, and lessons on outcome-based finance.

Other currently ongoing / relevant projects	Summary of project	Complementarity and synergies with the proposed Uzbekistan project
Accelerating Uzbekistan Climate Transition for Green, Inclusive and Resilient Economic Growth, AIIB / ADB co-financed programme	AIIB describes this programme as supporting the Government of Uzbekistan to respond to strategic climate priorities and binding constraints for resilient, inclusive, and low-carbon economic growth, co-financed by ADB. (aiib.org)	This is a policy and reform-oriented programme, not an SME adaptation deployment project. The proposed project can complement it by creating practical implementation pathways for climate resilience through SMEs, financial institutions, and localized climate intelligence.
World Bank report: Climate Adaptation in Uzbekistan: Landscape Restoration Opportunities	The World Bank's 2024 analytical work identifies landscape restoration opportunities in Uzbekistan and is relevant to land degradation and ecosystem-based adaptation. (World Bank)	This is analytical work rather than a direct implementation project. It can inform the proposed project's land restoration, desertification, and SME solution eligibility criteria, particularly under Component 2. The proposed project can operationalize some of the restoration opportunity areas through adaptation SMEs and financing linkages.
FAO climate-smart agriculture and water/land management activities in Uzbekistan	FAO supports climate-smart agriculture, sustainable land management, water efficiency, and food systems resilience in Uzbekistan and the wider region.	During full proposal preparation, the FAO country programme and active climate-smart agriculture, water-management and agrifood investment initiatives will be mapped jointly with FAO's Uzbekistan office. The project will avoid duplicating farmer training, demonstration activities or agrifood investment planning already financed by FAO. Coordination will focus on referring suitable SME technologies to existing agricultural programmes, using FAO technical standards where relevant and aligning Component 2 outreach with documented gaps in technology delivery and private-sector scaling.
GIZ Green Central Asia Initiative	Green Central Asia supports regional cooperation on climate, water, and security across Central Asia, including policy dialogue and knowledge exchange.	GIZ's Green Central Asia initiative focuses mainly on regional policy dialogue, knowledge exchange and transboundary cooperation. The proposed project will not duplicate these regional convening functions. Instead, project evidence and tools may be shared through Green Central Asia platforms, while implementation financing, SME acceleration and financial-institution engagement will remain under the proposed national project. The National Committee will coordinate participation in relevant regional events and avoid establishing parallel regional dialogue structures.
Central Asia Climate Foundation / regional climate innovation ecosystem initiatives	The Central Asia Climate Foundation states its mission as accelerating the climate transition in Central Asia by supporting policies, innovations, and partnerships. (Central Asia Climate Fundation)	The Foundation will be treated as a potential ecosystem and dissemination partner rather than an implementing or financing mechanism under the project. Any cooperation will be subject to confirmation of its active portfolio and comparative advantage during full proposal preparation. No project resources will be allocated to overlapping innovation calls, acceleration services or investor platforms without a prior mapping of existing services and a documented value-added role.
Uzbekistan Agrifood Investment Roadmap, EBRD / FAO Investment Centre	The EBRD and FAO Investment Centre have supported Uzbekistan in developing an agrifood investment roadmap that translates national climate commitments into priority investment opportunities for a greener and more resilient agrifood sector. The roadmap identifies a substantial investment pipeline through 2030, including measures relevant to climate-smart production, water productivity, value-chain modernization and resilient agrifood development.	The roadmap is highly relevant to Components 2 and 3 but operates primarily as a strategic investment-planning framework rather than an adaptation SME acceleration and performance-based grant programme. The proposed project will use the roadmap to inform sector prioritization, SME outreach and identification of adaptation investment opportunities, while avoiding the creation of a parallel agrifood investment pipeline. Adaptation SMEs and projects supported under the proposed project will be screened against relevant roadmap priorities, and investment-ready opportunities may be referred to EBRD, participating banks and other financiers. Coordination with EBRD and FAO will be initiated during full proposal preparation and formalized through periodic pipeline reviews led by the Ministry of Economy and Finance and the National Committee, with UNIDO participation.
Green Economy Financing Facility (GEFF and GEFF II Uzbekistan), EBRD and participating commercial banks	EBRD's Green Economy Financing Facility provides credit lines and concessional co-financing to participating financial institutions in Uzbekistan for on-lending to eligible green investments by businesses and households. GEFF II Uzbekistan has a framework of up to USD 100 million and includes investments that may support climate mitigation and adaptation. EBRD has provided or approved financing through Uzbek banks including Hamkorbank, Ipak Yuli Bank and Uzpromstroybank.	GEFF provides capital, technical eligibility criteria and green-lending capacity through participating banks, whereas the proposed project will address the earlier-stage adaptation-market barriers that constrain the generation and financing of adaptation SME opportunities. Component 3 will focus specifically on physical climate-risk assessment, adaptation impact measurement, adaptation business models and preparation of an investment-ready SME pipeline generated under Component 2. It will not establish a competing general green credit line where GEFF financing is already available. During full proposal preparation, UNIDO will consult EBRD and participating financial institutions to map existing GEFF products, eligible technologies, partner banks and technical-assistance packages. On this basis, Component 3 activities will be restricted to identified adaptation-specific gaps not covered by GEFF. Where appropriate, supported SMEs will be referred to GEFF partner banks for debt financing, and project-developed adaptation impact and risk tools will be aligned with or complement EBRD eligibility and reporting approaches. Any

Other currently ongoing / relevant projects	Summary of project	Complementarity and synergies with the proposed Uzbekistan project
		new blended-finance or risk-sharing instrument will be developed only following a documented market-gap assessment confirming that the financing need is not already addressed by GEFF or another existing facility.

I. Learning and knowledge management component

The project integrates learning and knowledge management across all components to ensure that implementation experience informs policy, investment, and future adaptation programming. Monitoring and evaluation systems will generate evidence on climate intelligence, adaptation SMEs, financing mechanisms, and institutional strengthening, with particular emphasis on the application of Adaptation Performance Targets (APTs) and performance-based financing. The analysis will cover the entire SME portfolio rather than only high-performing enterprises. It will examine why some innovations meet or exceed their Adaptation Performance Targets while others achieve only partial results or fail to reach expected outcomes. Factors assessed will include technology suitability, business-model viability, affordability, local demand, climate conditions, institutional constraints, beneficiary inclusion and the appropriateness of the performance targets themselves.

Lessons on enterprise performance, adaptation finance, and localized climate services will be translated into practical knowledge products, including case studies, technical guidance, analytical reports, and policy briefs tailored to policymakers, financial institutions, SMEs, and development partners. These products will be tailored to the needs of policymakers, financial institutions, SMEs, development practitioners, local authorities, communities and vulnerable beneficiary groups. Communities will contribute to the identification, interpretation and validation of lessons, particularly concerning usability, affordability, local knowledge, gender responsiveness and actual resilience benefits.

Knowledge exchange will be facilitated through national forums, technical workshops, stakeholder dialogues, and digital platforms, while lessons will be integrated into national adaptation processes and shared through Adaptation Fund, UNIDO, and GEF knowledge networks. Digital platforms will complement rather than replace non-digital dissemination. Knowledge will also be shared through community meetings, local-language materials, radio, demonstration activities, extension networks and trusted local organizations to ensure that people with limited connectivity or literacy can access and use project learning. The project will apply adaptive management not only to improve activity delivery, but also to test whether the project's underlying approaches remain appropriate. Evidence will be reviewed at inception, after the first SME support cycle, through annual portfolio and component reviews, and during the Mid-term Review. Where evidence shows that assumptions regarding SME-led delivery, beneficiary uptake, performance-based financing, climate information use or financial-sector engagement are not being met, the PMU will propose corrective changes for consideration by the Project Steering Committee. Approved decisions, including the evidence considered and changes introduced, will be recorded and subsequently assessed to determine whether they improved project performance.

J. Consultative processes

The concept was developed through an initial consultative process led by UNIDO and the National Committee on Ecology and Climate Change of the Republic of Uzbekistan. A multi-stakeholder consultation workshop was held on 18 June 2026 to present the project and gather feedback on climate priorities, institutional roles, adaptation solutions, financing barriers, and implementation arrangements. The consultation involved 9 participants (3 women and 6 men) representing 7 national institutions and organizations, with women accounting for 33 per cent of participants.

Participants included representatives from Uzhydromet, the Ministry of Agriculture, the Ministry of Water Resources, ICWC SIC, the Central Bank of Uzbekistan, the Entrepreneurship Development Company, and other national stakeholders. They confirmed the project's relevance and highlighted priorities including water scarcity, salinization, desertification, drought resilience, climate-resilient agriculture, and efficient water management, particularly in Karakalpakstan, Khorezm, the Fergana Valley, Muynak, and Surkhandarya. Stakeholders also recommended strengthening the involvement of key institutions, including the Ministry of Economy and Finance, AKIS, the Research Center for Combating Desertification, and financial institutions, and emphasized the need for user-oriented climate intelligence that supports decision-making by communities, farmers, SMEs, financial institutions, and local authorities.

These recommendations have been incorporated into the concept and will continue to inform project development. The initial consultation focused primarily on the project's technical and institutional design; environmental and social safeguards, gender, and community engagement will be addressed in greater detail during full proposal preparation.

During the full proposal phase, consultations will be expanded to national, regional, and community levels, engaging local authorities, women and youth organizations, farmer associations, SME networks, financial institutions, civil society organizations, and vulnerable communities. Dedicated consultations will inform the Environmental and Social Management Framework (ESMF), Gender Assessment, and Gender Action Plan, covering safeguards, grievance redress, equitable benefit-sharing, gender equality, and activity eligibility. Feedback will be documented in a consultation matrix and reflected in the final project design, implementation arrangements, monitoring framework, and safeguards instruments. The grievance redress mechanism will be presented in accessible formats and local languages before project implementation, with stakeholder feedback used to finalize its design.

K. Multiple perspectives on innovation

The project adopts an inclusive, participatory, and multi-stakeholder approach to innovation, recognizing that effective climate adaptation in Uzbekistan requires the integration of local knowledge, scientific expertise, private sector innovation, and public policy. Consistent with the Adaptation Fund's definition of innovation, the project emphasizes the co-creation, deployment, and scaling of adaptation solutions tailored to local climate risks and socio-economic conditions.

Vulnerable communities—including women, youth, smallholder farmers, pastoralists, and underserved groups—will actively participate in identifying climate risks, validating priorities, and refining adaptation solutions through consultations, pilot implementation, and feedback mechanisms. Local authorities and community organizations will ensure that interventions respond to regional development priorities and strengthen local ownership.

Adaptation SMEs are central to the innovation process. Through the Catalyzer and Catalyzer Plus approach, approximately 250–300 SMEs will be engaged, with 40–50 enterprises receiving acceleration support. Rather than acting solely as beneficiaries, SMEs will co-design deployment models, financing approaches, climate services, and Adaptation Performance Targets (APTs), drawing on their experience in climate-smart agriculture, water efficiency, climate information services, land restoration, and desert economy solutions.

Scientific partners, particularly Uzhydromet and the Research Center for Combating Desertification, will strengthen the evidence base through hydrometeorology, climate analytics, desertification monitoring, drought forecasting, and climate risk modelling. Collaboration with universities, technical experts, and international partners will further integrate scientific knowledge and emerging adaptation approaches into enterprise support and climate intelligence systems.

The project will also engage financial institutions—including commercial banks, microfinance institutions, and other adaptation finance actors—in developing climate risk assessment methodologies, adaptation finance approaches, and investment readiness frameworks. Their participation will ensure that financing mechanisms are practical, scalable, and aligned with national market conditions.

Government institutions, sectoral ministries, local authorities, and technical agencies will support the development and institutionalization of climate intelligence tools, adaptation planning approaches, safeguards systems, and policy recommendations, ensuring alignment with national priorities.

The project builds on lessons from UNIDO programmes including ASIF, KUAA, PARS, and CAIL, as well as the wider Adaptation Fund Innovation Facility, by adapting the Catalyzer methodology, APTs, performance-based financing, and safeguards to Uzbekistan's context. At the same time, it will contribute evidence from Central Asia to international adaptation innovation networks, particularly on dryland resilience, climate intelligence, and adaptation finance.

Structured coordination mechanisms—including technical working groups, advisory platforms, stakeholder consultations, pilot feedback loops, and knowledge-sharing workshops—will facilitate continuous collaboration, learning, and adaptive management throughout implementation.

L. Justification for funding

The proposed project requires Adaptation Fund financing because it addresses market and institutional failures that prevent climate adaptation from occurring under baseline development pathways in Uzbekistan. The project goes beyond conventional development interventions by strengthening climate intelligence, enabling adaptation SMEs, mobilizing adaptation finance, and supporting localized resilience planning in highly vulnerable regions. The project does not finance general enterprise development or financial-sector strengthening. Rather, it finances the incremental activities required to enable climate adaptation that would

not occur under conventional development programming. Support to SMEs is restricted to enterprises developing and deploying technologies, services or business models that directly address identified climate risks, including water scarcity, desertification, salinization, heat stress and climate-resilient livelihoods. Enterprise support is adaptation-specific through climate-risk screening, adaptation-focused eligibility criteria, climate resilience business development, Adaptation Performance Targets (APTs), environmental and social safeguards, adaptation impact monitoring and performance-based grant payments linked to verified resilience outcomes. These elements are not normally included in standard SME incubation or business development programmes and therefore represent the incremental cost of adaptation.

Similarly, Component 3 does not strengthen financial institutions in a general sense. Capacity building focuses specifically on integrating physical climate-risk considerations into lending decisions, developing adaptation finance products, improving adaptation investment appraisal, measuring resilience outcomes, and addressing barriers to financing adaptation SMEs. These activities respond directly to market failures associated with climate adaptation and would not be undertaken through conventional financial-sector development initiatives.

Although Uzbekistan has strengthened climate policies and hydrometeorological services, significant gaps remain in translating climate information into local adaptation action, scaling SME-led adaptation solutions, and mobilizing private investment. Existing programmes remain fragmented and do not address the ecosystem barriers limiting adaptation at scale.

Adaptation SMEs continue to face major constraints in accessing finance, demonstrating adaptation impact, and scaling their operations. Commercial finance is generally unavailable due to limited collateral, uncertain revenue streams, and limited experience among financial institutions in assessing adaptation investments. The project addresses these barriers through a structured SME pipeline, technical assistance, Catalyzer Plus performance-based grants, and Adaptation Performance Targets (APTs) that enable enterprises to demonstrate measurable resilience outcomes.

The project also finances activities that generate significant public goods but are unlikely to be supported through commercial markets, including localized climate intelligence, climate risk analytics, adaptation monitoring, institutional coordination, safeguards implementation, and knowledge generation. These investments create benefits such as improved water security, reduced drought vulnerability, ecosystem restoration, and strengthened resilience that extend well beyond individual beneficiaries.

In parallel, the project strengthens Uzbekistan's adaptation finance ecosystem by developing climate risk assessment tools, adaptation impact methodologies, and innovative financing approaches in partnership with financial institutions. These activities reduce market barriers, improve institutional capacity, and create conditions for sustained private investment in adaptation. The requested Adaptation Fund financing represents the incremental cost of integrating climate adaptation considerations into enterprise development, technology deployment and financial systems. Without these adaptation-specific investments, conventional SME support and financial-sector programmes would not systematically target climate resilience, measure adaptation outcomes or address the market failures associated with financing adaptation.

Adaptation Fund support is therefore essential to finance the additional costs of transitioning from fragmented, reactive adaptation towards an integrated, nationally embedded adaptation ecosystem that combines climate intelligence, SME innovation, finance, and institutional strengthening.

M. Sustainability of the project

The project is designed to generate lasting adaptation benefits by strengthening national institutions, private sector capacities, financial systems, and knowledge platforms rather than establishing stand-alone project structures. Sustainability is built around five mutually reinforcing pillars.

Institutional sustainability. Climate intelligence systems, localized climate risk analytics, and early warning approaches developed under Component 1 will be embedded within Uzhydromet, the Research Center for Combating Desertification, and relevant national institutions. Operational protocols, data-sharing arrangements, and coordination mechanisms will strengthen long-term collaboration between ministries, research institutions, local authorities, and financial actors while integrating project methodologies into national planning processes.

Market sustainability. Through the Catalyzer and Catalyzer Plus approach, approximately 40–50 SMEs will receive technical assistance, investment readiness support, partnership facilitation, and adaptation impact management systems, while around 20 enterprises will receive performance-based grants. The objective is to transition enterprises towards commercially viable business models capable of attracting commercial and blended finance beyond the project. Adaptation Performance Targets (APTs) will enable SMEs to demonstrate resilience outcomes to investors and financial institutions, strengthening the business case for continued adaptation investment. The project recognises that innovation inherently involves uncertainty and that not all supported SMEs are expected to achieve long-term commercial viability. Sustainability will therefore be pursued at portfolio level through a staged support model, whereby only enterprises demonstrating strong adaptation relevance, operational readiness and market potential progress to performance-based grant financing. Grant disbursement will be linked to Adaptation Performance Targets and agreed milestones, allowing support to be adjusted where necessary. Even where individual enterprises do not reach commercial viability, the project will retain adaptation benefits through strengthened financial institutions, validated adaptation methodologies, market evidence, trained entrepreneurs and lessons generated across the portfolio, thereby supporting continued replication and future investment in adaptation innovation.

Financial sustainability. The project will strengthen the adaptation finance ecosystem by equipping financial institutions with climate risk assessment methodologies, adaptation impact frameworks, and financing approaches tailored to adaptation investments. Stronger linkages between SMEs and financial institutions will encourage continued public and private investment beyond project completion.

Knowledge and policy sustainability. Project methodologies, climate intelligence tools, monitoring frameworks, and lessons learned will be integrated into national policies, sector strategies, and institutional planning systems. Knowledge products, technical guidance, case studies, and peer-learning platforms will continue supporting adaptation planning in Uzbekistan while contributing to regional and international learning networks.

Ownership and replication. Sustainability will be reinforced through participatory implementation, capacity building, and the progressive transfer of responsibilities to national institutions and local stakeholders throughout implementation. Successful adaptation solutions, financing mechanisms, and climate intelligence tools will be documented and translated into replication strategies to facilitate expansion into additional regions and sectors.

By project completion:

- climate intelligence systems will be institutionally embedded within national structures;
- SMEs will have strengthened operational and financial capacities to continue scaling adaptation solutions;
- financial institutions will possess practical tools to continue adaptation financing;
- project methodologies will be integrated into national planning and policy frameworks; and
- stakeholder networks and knowledge-sharing platforms will continue supporting adaptation collaboration and learning.

The project has been designed to avoid creating parallel systems or long-term operational liabilities. Equipment procured under Component 1 will be owned by the Research Center for Combating Desertification or other designated national partner institutions, which will assume responsibility for its operation and maintenance. During full proposal preparation, the technical, staffing and financial capacity of the recipient institutions, together with the associated recurrent costs and responsible budget holders, will be confirmed. Similarly, the digital application management system under Component 2 will build on an existing platform adapted for the project's two SME calls, thereby minimizing development, hosting and maintenance costs while ensuring continuity through an established service provider.Overall, the project promotes systemic transformation by strengthening institutions, markets, finance, and national ownership, creating the conditions for long-term, self-sustaining climate resilience in Uzbekistan.

N. Environmental and social impacts and risks

The project is expected to generate significant positive environmental and social impacts, particularly through strengthening resilience, supporting sustainable land and water management, and promoting inclusive economic opportunities. At the same time, certain potential environmental and social risks may arise, particularly through SME-supported activities under Component 2. A risk screening was conducted for the planned activities under this project and as a result the project is categorised as potential moderate risk (Category B). As a standard requirement for Adaptation Fund projects, an Environmental and Social Impact Assessment (ESIA), proportionate to the identified risk level, will be carried out to examine the project's potential environmental and social impacts. This study will culminate in the development of an Environmental and Social Management Framework (ESMF), considering that specific interventions, sites, and beneficiaries will be identified during project implementation

The screening provides a preliminary assessment of potential direct, indirect, cumulative and transboundary impacts at portfolio level, which will be further evaluated in the ESMF. The ESMF will also establish a screening procedure to assess these risks at sub-project level during implementation, including cumulative impacts where multiple supported activities may affect shared natural resources such as land and water.

In sum, the ESMF will:

- Guide the identification, assessment, and management of potential environmental and social risks stemming from project activities
- Define clear eligibility and exclusion criteria for enterprises and financial beneficiaries.
- Require mandatory environmental and social screening of all prospective beneficiaries prior to the provision of business development services, investment facilitation, or financial support.
- Classify beneficiaries according to a proportional risk approach, with corresponding mitigation and monitoring measures applied.
- Ensure all future project initiatives, including pilot activities yet to be identified, fall under Category B or below according to UNIDO ESSPP.
- Require culturally appropriate consultation and the application of FPIC principles, in line with UNIDO ESSPP, before approving any activities that may affect customary land use, natural resources, or livelihoods.
- Ensure continuous stakeholder engagement, disclosure of relevant information in accessible formats, and inclusive participation at local level; and
- Establish a project level grievance redress mechanism applicable to communities, workers, enterprises, and other stakeholders, including those participating in or affected by financial support mechanisms.

The table below summarizes the screening of environmental and social principles and identifies where further assessment and management measures will be required.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		**MEDIUM RISK** – While the project is fully aligned with Uzbekistan's national regulations and benefits from strong government ownership, some uncertainty remains regarding the compliance capacity of implementing partners, subcontractors, and SMEs to be supported under Component 2. To mitigate this risk, all partners and SMEs will undergo compliance screening prior to engagement, including verification of registration status, permits, and adherence to applicable environmental and social regulations. Any identified gaps will require corrective actions prior to participation. Further assessment and mitigation measures will be elaborated through the ESMF. Environmental and social screening will also verify that any project-supported digital climate services comply with applicable national requirements governing the use and communication of official meteorological information.

Access and Equity		**LOW RISK** – The project aims to enhance climate resilience of vulnerable populations, including rural communities and smallholder farmers. However, there is a risk that certain groups, particularly those in remote areas or with limited access to information, may not fully benefit from project interventions. Measures will be implemented to ensure equitable access to climate information, financing, and adaptation solutions, including targeted outreach and inclusive design of tools and programmes. Further assessment will be carried out during implementation.
Marginalized and Vulnerable Groups		**MEDIUM RISK** – Vulnerable groups, including low-income rural households, women, and youth, may face structural barriers to accessing project benefits, particularly in relation to SME support and financial services. The project will include targeted measures to ensure inclusion, including tailored outreach, capacity building, and prioritization criteria. Participatory approaches will be applied to ensure that interventions reflect the needs of vulnerable groups. Further assessment and monitoring will be conducted during implementation.
Human Rights		**LOW RISK** – The project is aligned with national and international human rights standards and is expected to generate positive impacts through improved livelihoods, access to information, and resilience. However, since SMEs and subcontractors are not yet identified, their practices may vary. Screening procedures under the ESMF will ensure compliance with human rights, labour standards, and non-discrimination principles.
Gender Equity and Women's Empowerment		**MEDIUM RISK** – While the project promotes gender equality, there is a risk that women may face barriers to participation due to structural constraints such as limited access to finance, land, or decision-making processes. The project will integrate gender-responsive approaches across all components, including targeted SME support, training, and monitoring of gender-disaggregated outcomes. A Gender Action Plan will be developed to ensure systematic integration of gender considerations.
Core Labour Rights		**LOW RISK** – SMEs and local contractors may operate under varying labour conditions, including informal arrangements. Risks include lack of occupational safety standards or limited awareness of labour rights. The project will promote compliance with core labour standards through screening, contractual requirements, and capacity building. Further assessment will be conducted during implementation.
Indigenous Peoples	X	**LOW RISK** – There are no distinct Indigenous Peoples as defined under the Adaptation Fund policy in the Uzbekistan context. No adverse impacts are expected.
Involuntary Resettlement	X	**LOW RISK** – The project will not finance activities involving involuntary physical or economic displacement, compulsory land acquisition or restriction of legally recognised land-use rights. However, because specific SME-supported activities will only be identified during implementation, screening under the ESMF will verify that any land-based interventions are implemented on land where appropriate legal access and stakeholder agreement have been secured and that no involuntary resettlement or significant livelihood impacts occur. Activities presenting such risks will not be eligible for financing.
Protection of Natural Habitats		**MEDIUM RISK** – Some SME-supported activities (e.g. land restoration, agriculture, water management) may interact with natural habitats. If not properly designed, there is a risk of habitat disturbance or maladaptation. The project will apply environmental screening, promote sustainable land-use practices, and exclude activities with significant negative impacts.
Conservation of Biological Diversity		**LOW RISK** – Project activities are expected to have positive impacts on biodiversity through sustainable land management and restoration. However, there is a risk that poorly designed interventions could reduce biodiversity (e.g. monoculture practices). The project will promote biodiversity-friendly approaches and apply screening criteria to avoid negative impacts.
Climate Change		**LOW RISK** – The project is specifically designed to strengthen climate resilience and adaptive capacity in Uzbekistan by supporting adaptation SMEs, enhancing climate intelligence systems, and promoting climate-informed decision-making. It will not generate significant or unjustified increases in greenhouse gas emissions. Where possible, mitigation co-benefits associated with supported adaptation solutions will be considered an added value. However, SMEs supported under the project may still engage in conventional production activities, including the use of energy-intensive technologies or equipment that could generate emissions. In addition, there is a potential risk of maladaptation if solutions are not appropriately designed for local climatic conditions. To mitigate these risks, the project will apply dedicated screening frameworks to assess climate relevance, avoid maladaptive practices, and prioritize solutions that demonstrably enhance resilience. Adaptation Performance Targets will further ensure that supported SMEs deliver measurable climate adaptation outcomes. All subprojects will be screened under the ESMF, and additional mitigation measures will be elaborated during full proposal development.
Pollution Prevention and Resource Efficiency		**LOW RISK** – Some SME activities may involve resource use or minor waste generation (e.g. agricultural inputs, water use). The project will promote resource-efficient technologies, sustainable practices, and waste management measures. Further assessment will be conducted through the ESMF.
Public Health		**LOW RISK** – Project activities do not involve hazardous materials or large-scale infrastructure. However, minor risks may arise from certain technologies or agricultural practices. These will be mitigated through training, standards, and monitoring.
Physical and Cultural Heritage	X	**LOW RISK** – The project is not expected to finance activities affecting recognised cultural heritage sites. Nevertheless, because implementation locations will be selected during project implementation, screening procedures under the ESMF will verify that proposed activities avoid protected cultural heritage and comply with national legislation. Any activity with potential adverse impacts on physical or cultural heritage will require appropriate assessment and avoidance measures and will not be supported where unacceptable impacts cannot be mitigated.
Lands and Soil Conservation		**MEDIUM RISK** – While the project promotes land restoration and sustainable practices, there is a risk of maladaptation or inappropriate land-use practices by SMEs if not properly guided. This will be mitigated through technical screening, climate suitability assessments, and promotion of sustainable land management practices.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Institutional arrangements

The project will be implemented by the United Nations Industrial Development Organization (UNIDO) as the Adaptation Fund accredited Implementing Entity (IE) and co-executed by the National Committee on Ecology and Climate Change of the Republic of Uzbekistan and UNIDO.

As the accredited Implementing Entity, UNIDO will provide fiduciary oversight and quality assurance to ensure that the project is implemented in accordance with the Adaptation Fund's policies and requirements and UNIDO's rules and procedures. UNIDO will supervise overall project implementation, monitor compliance with environmental, social, fiduciary and gender requirements, oversee project reporting, and commission the independent terminal evaluation.

The National Committee on Ecology and Climate Change will serve as the lead national Executing Entity, responsible for overall national coordination and execution of project activities, stakeholder engagement, government coordination and implementation of Components 1 and 4. UNIDO will serve as co-Executing Entity for Components 2 and 3, reflecting its comparative advantage and global experience in climate adaptation innovation, SME incubation and acceleration, Adaptation Performance Targets (APTs), performance-based grants and adaptation finance. UNIDO will lead the technical execution of these components, ensuring the adaptation and application of methodologies and tools developed through its global adaptation innovation portfolio, while working closely with the National Committee and relevant national stakeholders, including financial institutions, entrepreneurship support organizations, SMEs, Uzhydromet, the Research Center for Combating Desertification, and other institutions identified in Section B, to ensure national ownership and long-term sustainability. UNIDO’s execution role under Components 2 and 3 will primarily consist of providing specialized technical assistance directly to national entities to adapt and apply proven UNIDO methodologies to the Uzbekistan context. Appointing a separate executing partner would therefore not substitute for UNIDO’s technical role, as the required methodologies, tools and associated expertise would still need to be provided by UNIDO. Instead, it would introduce an additional intermediary between UNIDO and the national institutions ultimately applying these approaches, potentially fragmenting technical accountability and slowing adaptation of the methodologies based on implementation experience. Direct technical execution by UNIDO enables continuous collaboration with national partners and adaptive management of the methodologies and delivery approaches as they are tested and institutionalized in Uzbekistan.

The arrangement will also enable UNIDO to provide adaptive technical management throughout implementation, allowing methodologies, tools and delivery approaches to be adjusted based on implementation experience, SME performance, stakeholder feedback and emerging national needs.

To manage UNIDO’s dual role, its Implementing Entity oversight functions will remain separate from its technical execution functions. Independent fiduciary oversight, quality assurance, safeguards compliance, monitoring and evaluation will be maintained through the relevant UNIDO functions and procedures, with detailed responsibilities and reporting lines established in the full proposal. Execution costs attributable to the UNIDO-executed portion of the project will be separately identified and will comply with the Adaptation Fund ceiling of 1.5 per cent of the portion executed by the Implementing Entity.

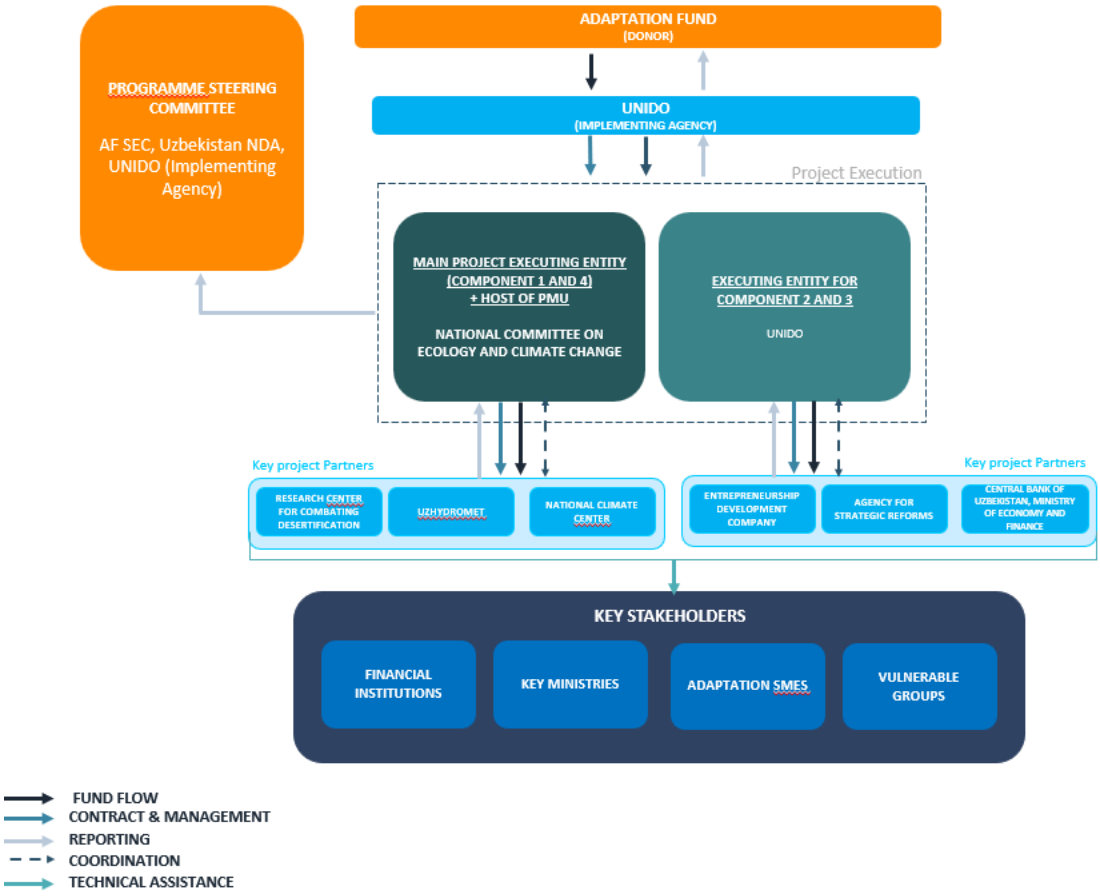
To ensure close coordination between the two Executing Entities, the Project Management Unit (PMU) will be co-hosted by the National Committee on Ecology and Climate Change and UNIDO. The PMU will comprise dedicated project personnel, including a Project Manager, Finance and Procurement Officer, Monitoring and Evaluation Specialist, SME and Innovation Lead, Climate Finance Specialist, Environmental and Social Safeguards Officer, Gender Specialist and administrative support. Staff responsibilities will be allocated according to the respective execution responsibilities of each Executing Entity. The PMU will be responsible for day-to-day project management, implementation, monitoring, reporting and coordination of project partners and service providers. Where required, the National Committee and/or UNIDO may competitively procure specialised service providers to support implementation of specific activities.

Execution costs will be allocated between the National Committee and UNIDO in accordance with their respective implementation responsibilities and will be presented separately in the full proposal, consistent with Adaptation Fund requirements.

The project will establish a Project Steering Committee (PSC) to provide strategic oversight and guidance. The PSC will review implementation progress, monitoring evidence and portfolio learning reviews, and approve adaptive adjustments to implementation approaches, selection criteria, delivery arrangements, component priorities and annual work plans where required, subject to UNIDO and Adaptation Fund approval requirements for material project revisions.

The PSC will be chaired by the Designated Authorities, and gender parity will be actively pursued in its composition. It is expected to include representatives of the National Committee on Ecology and Climate Change, Uzhydromet, the Ministry of Water Resources, the Ministry of Economy and Finance, the Central Bank of Uzbekistan, the Entrepreneurship Development Company, the Agency for Strategic Reforms, the Research Center for Combating Desertification and other relevant stakeholders. Membership will include senior representatives from government, financial institutions, entrepreneurship (including a representative of a women's business association) and vulnerable groups, including youth organisations and rural women's associations.

The PSC will be established by UNIDO in consultation with the Government of Uzbekistan and the Executing Entities to ensure an appropriate balance of technical expertise, strategic oversight and stakeholder representation. The PSC will meet at least twice per year, with extraordinary meetings convened as required. The final implementation arrangements and institutional composition will be confirmed during full proposal development.



Legal Context

The Government of the Republic of Uzbekistan agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed and entered into force on 10 June 1993.

B. Demonstrate how the project / programme aligns with the Results Framework of the Adaptation Fund

Project Objective(s)[16]	Project Outcome Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Outcome 1.1: Vulnerable communities, SMEs and local authorities use climate intelligence to reduce climate risks	- % of targeted population receiving early warning information - People covered by new or improved early warning systems - Number of policies integrating adaptation tools	Outcome 1: Reduced exposure to climate-related hazards and threats	Indicator 1: People using climate-related threat and hazard information [# of people, by sex, by sector, and by hazard]	600,000
Outcome 1.2: Institutional capacities strengthened to apply climate intelligence for anticipatory adaptation and resilience planning	- Operational interoperability framework established and used by participating climate information institutions. - Number of institutions using climate intelligence systems - Number of institutions applying climate-informed planning - Number of institutional frameworks updated	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	Indicator 2: Institutions with strengthened capacity to understand and better address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	600,000
Outcome 2.1: Adaptation SMEs identified, strengthened, and enabled to deliver viable solutions	- Number of SMEs supported (gender/youth disaggregated) - % of SMEs achieving Adaptation Performance Targets - Number of viable adaptation business models developed	Outcome 8: Innovation for effective, long-term adaptation to climate change accelerated, encouraged, and enabled to scale up	Indicator 8A: Innovations successfully reaching scale up that demonstrate local innovation participation and/or local innovation benefit [# of innovations]	600,000
Outcome 2.2: Adaptation solutions financed, deployed, and scaled in vulnerable communities	- Number of beneficiaries accessing adaptation solutions - Number of pilot projects implemented - % increase in resilience among targeted communities	Outcome 8: Innovation for effective, long-term adaptation to climate change accelerated, encouraged, and enabled to scale up	Indicator 8A: Innovations successfully reaching scale up that demonstrate local innovation participation and/or local innovation benefit [# of innovations]	1,100,000
Outcome 3.1: Financial institutions capacitated to assess and invest in adaptation solutions	- Number of financial institutions using climate risk tools - Number of staff trained	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	Indicator 2: Institutions with strengthened capacity to understand and better address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	300,000
Outcome 3.2: Innovative adaptation finance instruments developed and investment flows increased	- Number of financial instruments developed	Outcome 8: Innovation for effective, long-term adaptation to climate change accelerated, encouraged, and enabled to scale up	Indicator 8A: Innovations successfully reaching scale up that demonstrate local innovation participation and/or local innovation benefit [# of innovations]	300,000
Outcome 4.1: Evidence, learning, and adaptation innovation models generated and disseminated	- Number of knowledge products developed - Number of stakeholders engaged - Adoption of M&E systems - Number of community-level participatory learning and feedback processes conducted, including accessible non-digital dissemination activities. - Number of formal adaptive-management reviews completed	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes	Indicator 3A: People with strengthened awareness of climate change risks and how to better address them [# of people, disaggregated by sex, by vulnerable groups, and by sector]	428,655

[16] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

	and resulting decisions documented and followed up.			
Outcome 4.2: Replication and scaling pathways established for adaptation solutions and financing mechanisms	- Replication strategies developed and applied Partnerships established	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	Indicator 7: Policies, strategies, and/or plans adopted, implemented, and/or enforced that integrate climate risk and resilience considerations [#, disaggregated by scale, by policy step, and by sector]	428,655
Total outcome-level grant amount				**4,357,310**
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
1.1.1: Climate intelligence and early warning data from Uzhydromet and partner institutions integrated into user-oriented adaptation decision-support services	-Number of climate intelligence and early warning datasets integrated into user-oriented decision-support services	Output 1.2: Targeted population groups covered by warning and advisory services for climate related hazards and threats	Indicator 1.2B: People covered by new or improved early warning systems [# of people, disaggregated by sex and by hazard]	250,000
1.1.2: Localized climate risk advisory tools deployed for vulnerable communities, SMEs, and local authorities	- Number of localized climate risk advisory tools developed and deployed; -Number of target regions/communities covered by localized advisory tools		Indicator 1.2B: People covered by new or improved early warning systems [# of people, disaggregated by sex and by hazard]	250,000
1.1.3: Climate-informed adaptation planning and response protocols institutionalized in priority sectors and regions	-Number of climate-informed adaptation planning and response protocols developed and formally adopted		Indicator 1.2B: People covered by new or improved early warning systems [# of people, disaggregated by sex and by hazard]	100,000
1.2.1: National and sub-national institutions trained in the application of climate intelligence for adaptation planning and investment prioritization	- Number of institutions receiving capacity building on climate intelligence; -Number of institutional staff trained, disaggregated by sex	Output 2.1: Strengthened capacity of institutions to understand and better address climate risks	Indicator 2.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	150,000
1.2.2: Operational coordination and data-sharing mechanisms established between climate, finance and adaptation actors	-Number of operational coordination and data-sharing mechanisms established; -Number of participating institutions applying agreed data-sharing protocols/standards		Indicator 2.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	150,000
1.2.3: Research Center for Combating Desertification strengthened to deliver climate risk analytics and decision-support services	-Number of climate risk analytics and decision-support tools/services operationalized by the Research Center; -Number of Research Center staff trained to operate and maintain supported tools/services, disaggregated by sex		Indicator 2.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	300,000

2.1.1: Adaptation SME pipeline identified through calls for proposals	- Number of adaptation SMEs identified through calls for proposals, disaggregated by women-/youth-led or owned SMEs; -Number of eligible SMEs selected for project support	Output 8.1: Innovations identified and piloted that collectively enhance local innovation capacity and contribute to the development of local, national and regional adaptation innovation ecosystems	Indicator 8.1A: Innovations identified that demonstrate local innovation participation and/ or local innovation benefit [# of innovations]	100,000
2.1.2: MSMEs supported through incubation and acceleration programmes	-Number of MSMEs completing incubation/acceleration support, disaggregated by women-/youth-led or owned SMEs		Indicator 8.1A: Innovations identified that demonstrate local innovation participation and/ or local innovation benefit [# of innovations]	150,000
2.1.3: Adaptation Performance Targets and investment plans developed	-Number of supported MSMEs with validated Adaptation Performance Targets; -Number of supported MSMEs with investment plans developed		Indicator 8.1A: Innovations identified that demonstrate local innovation participation and/ or local innovation benefit [# of innovations]	300,000
2.2.1: Performance-based grant mechanism implemented to support adaptation SMEs	- Number of adaptation SMEs receiving performance-based grants, disaggregated by women-/youth-led or owned SMEs; -Value of performance-based grants disbursed (USD)	Output 8.1: Innovations identified and piloted that collectively enhance local innovation capacity and contribute to the development of local, national and regional adaptation innovation ecosystems	Indicator 8.1A: Innovations identified that demonstrate local innovation participation and/ or local innovation benefit [# of innovations]	950,000
2.2.2: Adoption of solutions facilitated with safeguards applied	-Number of adaptation solutions deployed through supported SMEs; -Percentage of supported deployments screened and compliant with applicable environmental, social and gender safeguards		Indicator 8.1A: Innovations identified that demonstrate local innovation participation and/ or local innovation benefit [# of innovations]	150,000
3.1.1: Climate risk assessment tools developed and applied	- Number of financial institutions using climate risk tools - Number of staff trained	Output 2.1: Strengthened capacity of institutions to understand and better address climate risks	Indicator 2.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	100,000
3.1.2: Adaptation impact assessment toolkits integrated	-Number of participating financial institutions integrating adaptation impact assessment tools into relevant appraisal/decision-making processes		Indicator 2.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	75,000
3.1.3: Capacity building programmes delivered	-Number of capacity-building programmes delivered to financial institutions; -Number of financial institution staff trained, disaggregated by sex		Indicator 2.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	125,000
3.2.1: Financial instruments co-designed	- Number of adaptation finance instruments co-designed with participating financial institutions;	Output 8.1: Innovations identified and piloted that collectively enhance local innovation capacity and	Indicator 8.1A: Innovations identified that demonstrate local innovation participation and/ or local innovation benefit [# of innovations]	175,000

3.2.2: Investment pipeline developed and connected to financing partners	-Number/value of adaptation investment opportunities included in the investment pipeline; -Number of investment opportunities connected to potential financing partners	contribute to the development of local, national and regional adaptation innovation ecosystems	Indicator 8.1A: Innovations identified that demonstrate local innovation participation and/ or local innovation benefit [# of innovations]	125,000
4.1.1: Knowledge products and evidence on adaptation SMEs, climate intelligence applications, and adaptation finance generated and disseminated	- Number of knowledge products developed and disseminated	Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	Indicator 3.2: Climate resilience knowledge products and/or tools developed and shared with stakeholders [# of products/tools, by sector]	125,000
4.1.2: National and regional knowledge-sharing and peer learning platforms supported	-Number of knowledge-sharing/peer-learning activities conducted; -Number of stakeholders participating, disaggregated by sex and stakeholder group		Indicator 3.2: Climate resilience knowledge products and/or tools developed and shared with stakeholders [# of products/tools, by sector]	125,000
4.1.3: Monitoring, evaluation, and adaptation impact learning systems operationalized	- M&E and adaptation impact learning system operational		Indicator 3.2: Climate resilience knowledge products and/or tools developed and shared with stakeholders [# of products/tools, by sector]	178,655
4.2.1: Replication strategies developed for scalable adaptation SME solutions and climate intelligence applications	- Replication strategies developed	Output 7: Improved integration of climate-resilience strategies into country development plans	Indicator 7.1A (Core Indicator 6): Policies, strategies, and/or plans developed or adjusted to integrate climate risk and resilience considerations [# of policies, strategies, and/or plans, disaggregated by scale and by sector]	125,000
4.2.2: Partnerships and investment linkages strengthened to support post-project scaling	-Number of partnerships established to support replication/scaling; -Number of supported SMEs/solutions linked to follow-on financing or scaling partners		Indicator 7.1A (Core Indicator 6): Policies, strategies, and/or plans developed or adjusted to integrate climate risk and resilience considerations [# of policies, strategies, and/or plans, disaggregated by scale and by sector]	178,655
4.2.3: Lessons and methodologies integrated into national and international adaptation innovation networks	-Number of national/international adaptation innovation networks through which project methodologies and lessons are disseminated or integrated; - Number of project methodologies/approaches taken up by relevant networks, programmes or institutions		Indicator 7.1A (Core Indicator 6): Policies, strategies, and/or plans developed or adjusted to integrate climate risk and resilience considerations [# of policies, strategies, and/or plans, disaggregated by scale and by sector]	125,000
Total output-level grant amount				**4,357,310**

PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government[17] *Provide the name and position of the government official and indicate date of endorsement for each country participating in the proposed project / programme. Add more lines as necessary. The endorsement letters should be attached as an annex to the project/programme proposal. Please attach the endorsement letters with this template; add as many participating governments if a regional project/programme:*

Mr. Aziz Abdukhakimov, Chairman/ Advisor to the President of the Republic of Uzbekistan on Environment *National Committee on Ecology and Climate Change of the Republic of Uzbekistan*	Date*: 08 May 2026*

B. Implementing Entity certification *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (……list here…..) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Ms. Ganna Onysko *Senior GEF, GCF, AF Coordinator* *Division of Funding Partner Relations* *Directorate of Global Partnerships and External Relations* *United Nations Industrial Development Organization - UNIDO* *Implementing Entity Coordinator*	
Date: *26 August 2026*	Tel. and email:
Project Contact Person:	
Tel. And Email g.onysko@unido.org CC: gef@unido.org / glo@unido.org / f.haidara@unido.org	

Annex I – Preliminary Gender Assessment and Gender Action Plan RISE Uzbekistan

Part I: Gender Assessment

1. Background and Methodology

[6] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

This preliminary Gender Assessment has been prepared for the Adaptation Fund concept "Resilience innovation and scaling ecosystem (RISE) Uzbekistan: climate intelligence, adaptation solutions and finance for resilient communities". The assessment aims to identify key gender inequalities relevant to climate adaptation, climate-sensitive livelihoods, entrepreneurship, and access to finance in Uzbekistan, and to inform the design of gender-responsive project interventions. A more elaborate Gender Assessment and Gender Action Plan will be presented at the submission of the full proposal stage.The assessment is based on a review of national policy documents, World Bank[18] and UN reports[19], UN Women statistics[20], International Labour Organization (ILO) studies[21], and project stakeholder consultations described in the concept note. Particular attention was given to gender dimensions of climate vulnerability, women's participation in economic activities, access to finance, entrepreneurship, and decision-making in climate-sensitive sectors. The preliminary assessment is based primarily on a desk review of national policies, gender statistics and relevant analytical reports. Although the concept was informed by an initial technical stakeholder consultation, that consultation did not include sufficiently broad or dedicated engagement on gender issues. A participatory Gender Assessment will therefore be undertaken during full proposal preparation with gender-mandated institutions, women's organizations, women entrepreneurs and women from target communities.

2. Gender Context in Uzbekistan

Uzbekistan has made significant progress on gender equality in recent years, supported by the Law on Equal Rights and Opportunities for Women and Men, the Gender Equality Strategy, and increasing representation of women in public institutions. Women currently hold approximately 34.6 per cent of parliamentary seats and Uzbekistan has improved its standing in international gender rankings. Nevertheless, important gender gaps remain in economic participation, access to productive assets, entrepreneurship, and leadership positions.

Women are highly represented in education, health, and social sectors, but remain underrepresented in higher-paying industries, technology sectors, finance, and business leadership. According to the ILO, women in wage employment earn on average 25-35 per cent less than men. Traditional gender norms continue to assign women a disproportionate share of unpaid care and household responsibilities, reducing opportunities for entrepreneurship, skills development, and participation in decision-making.

Climate change compounds these inequalities. Women are often concentrated in climate-sensitive sectors such as agriculture, food processing, household water management, and informal rural enterprises. Increasing droughts, water scarcity, land degradation, salinization, and dust storms therefore create disproportionate burdens on women, particularly in rural areas and in regions affected by the Aral Sea crisis.

3. Gender, Climate Vulnerability and Adaptation

The project targets regions where climate risks are particularly acute, including Karakalpakstan, Khorezm, dryland regions, and irrigated agricultural areas. Women in these regions frequently face lower access to land ownership, agricultural inputs, finance, climate information, extension services, and technology adoption opportunities.

Climate-related impacts may increase women's workload through longer distances for water collection, reduced agricultural productivity, increased household care responsibilities, and reduced livelihood opportunities. Female entrepreneurs and women-led SMEs frequently face additional barriers related to collateral requirements, limited financial literacy opportunities, smaller professional networks, and reduced access to investment.

At the same time, women represent an important source of adaptation knowledge and innovation. Women entrepreneurs are increasingly active in agribusiness, food processing, climate-smart agriculture, digital services, and community-based enterprises. Strengthening women's participation in adaptation SMEs therefore represents both a climate resilience opportunity and a gender equality intervention.

4. Gender-Relevant Risks and Opportunities for the Project

The project presents substantial opportunities to enhance women's resilience and economic empowerment. Component 1 can improve women's access to localized climate information and early warning services. Component 2 can strengthen women-led adaptation SMEs and increase women's participation in adaptation value chains. Component 3 can improve access to climate finance and promote gender-responsive financial products. Component 4 can ensure that lessons on gender-responsive adaptation are captured and disseminated.

Potential risks include:

[18] World Bank Country Gender Assessment Report: Uzbekistan

[19] Common Country Analysis | United Nations in Uzbekistan

[20] Country Fact Sheet | UN Women Data Hub

[21] The Gender Pay Gap in Uzbekistan: Recent Trends and Policy Implications | International Labour Organization

- Underrepresentation of women among supported SMEs.
- Limited participation of women in technical training and finance-related activities.
- Unequal access to grant financing due to collateral, networking, or information barriers.
- Digital exclusion affecting women's access to climate intelligence services.
- Persistence of gender stereotypes within participating institutions and enterprises.

These risks can be mitigated through targeted outreach, gender-sensitive selection criteria, gender-responsive training delivery, collection of sex-disaggregated data, and dedicated support to women-led enterprises.

5. Policy and Institutional Framework

The project aligns with Uzbekistan's Gender Equality Strategy, the Law on Equal Rights and Opportunities for Women and Men, the Law on Protection of Women from Harassment and Violence, and broader national commitments under the SDGs. The Family and Women's Committee, women entrepreneur associations, chambers of commerce, financial institutions, and development partners provide important entry points for implementation of gender-responsive activities.

Overall, the project is expected to contribute positively to women's economic empowerment, adaptive capacity, and participation in climate resilience decision-making. A gender-responsive implementation approach will be required throughout project execution to ensure equitable access to project benefits.

Part II: Gender Action Plan

Impact Statement:

Women and girls in climate-vulnerable regions of Uzbekistan have enhanced resilience, improved access to climate information and adaptation solutions, and increased participation in climate adaptation entrepreneurship and finance.

Outcome Statement:

Women entrepreneurs, women-led SMEs, and women beneficiaries participate equitably in project-supported climate intelligence, adaptation solution deployment, and adaptation finance activities.

Preliminary identified key actions, targets and indicators:

Key actions and targets	Indicators
1. Ensure that at least 40 per cent of SMEs supported under incubation, acceleration, and grant mechanisms are women-led or women-owned. 2. Ensure a minimum of 40 per cent of female participation in training, advisory services, climate intelligence activities, and stakeholder consultations. 3. Integrate gender-responsive selection criteria into SME screening, grant allocation, and finance ecosystem activities. 4. Develop gender-sensitive climate advisory tools and communication materials accessible to women in rural communities. 5. Collect and report sex-disaggregated data across all project indicators and beneficiary groups 6. Provide tailored mentoring, networking, and investment readiness support for women entrepreneurs. 7. Promote women's representation in project governance structures, including the Project Steering Committee and technical working groups. 8. Conduct annual reviews of gender performance and integrate findings into adaptive project management.	• Number and percentage of women beneficiaries. • Number and percentage of women-led SMEs supported. • Number of women receiving climate information and advisory services. • Number of women participating in capacity-building activities. • Volume of financing mobilized for women-led adaptation SMEs. • Percentage of project governance positions occupied by women.

ADAPTATION FUND

Letter of Endorsement by Government

The Republic of Uzbekistan

Date: 08.05.2026
№: 01-04/8-351

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for Resilience Innovation and Scaling Ecosystem (RISE) Uzbekistan: Climate Intelligence, Adaptation Solutions and Finance for Resilient Communities

In my capacity as designated authority for the Adaptation Fund in the Republic of Uzbekistan, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Uzbekistan.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by United Nations Industrial Development Organization (UNIDO) and executed by the National Committee for Ecology and Climate Change of the Republic of Uzbekistan and UNIDO.

Sincerely,

Aziz Abdukhakimov
Advisor to the President, Chairperson
National Committee for Ecology and Climate Change
Republic of Uzbekistan

Revised PFG Submission Form[1]

Project Formulation Grant (PFG)

Submission Date:

Adaptation Fund Project ID:
Country/ies: Uzbekistan
Title of Project/Programme: Resilience Innovation and Scaling Ecosystem (RISE) Uzbekistan: Climate Intelligence, Adaptation Solutions and Finance for Resilient Communities
Type of IE (NIE/RIE/MIE): Multilateral Implementing Entity
Implementing Entity: United Nations Industrial Development Organization
Executing Entity/ies: UNIDO[2]

A. Project Preparation Timeframe

Start date of PFG	1 January 2027
Completion date of PFG	1 March 2028

B. Proposed Project Preparation Activities ($)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US$ Amount	Budget note[3]
1a. Local Stakeholder Consultations 1b. National validation workshop	**Stakeholder validation and consultation reports**	44,000	**Estimated costs** $15,000 – Costs for engagement of local expert(s) and/or service provider(s) to conduct stakeholder and value chain consultations $12,000 – Travel costs for local consultations in target regions and districts

[1] As presented in AFB/PPRC.33/40 Annex 1.
[2] The National Committee on Ecology and Climate Change of the Republic of Uzbekistan will be engaged as service provider in key activities under this PFG.
[3] The proposal should include a detailed budget with budget notes indicating the break- down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.

			$4,000 – Costs for engagement of local expert(s) and/or service provider(s) to support preparation and facilitation of the national validation workshop $5,000 – Costs for national validation workshop in Tashkent $8,000 – Travel costs for national validation workshop
2a. CRVA for target regions 2b. GIS-based data collection and vulnerability mapping 2c. Environmental and social assessment 2d. Gender analysis and action plan development 2e. Confirmation of execution entity 2f. Project budget, disbursement schedule, workplan and institutional arrangements development, including draft TORs for the Executing Entity and PMU	**2. Fully developed proposal document and associated annexes in compliance with UNIDO and AF guidelines and policies**	94,249	$8,249.00 - Costs for engagement of CRVA expert(s) and/or service provider(s) $15,500.00 - Costs for engagement of service provider(s) for data collection $10,000.00 - Costs for engagement of ESS expert(s) and/or service provider(s) $5,500.00 - Costs for engagement of gender expert(s) and/or service provider(s) $10,000.00 - Costs for engagement of expert(s) for preparing project budget, workplan and institutional arrangements $30,000.00 - Costs for engagement of international expert(s) and/or service providers

2g. Writing and revision of the main proposal document 2h. Coordination for proposal finalization among all stakeholders during development and review			for writing and finalization of full proposal $15,000.00 - Costs for engagement of local expert(s) and/or service providers for writing and finalization of full proposal
Sub-total		138,249	
Implementing Entity Fee Administrative and technical support for project preparation	IE administrative and technical support for project development	11,751	Covers coordination, technical review, and submission support
Total Project Formulation Grant		150,000	

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Ms. Ganna Onysko Senior GEF, GCF, AF Coordinator Division of Funding Partner Relations Directorate of Global Partnerships and External Relations United Nations Industrial Development	Ganna Onysko	28 August 2026	Ms. Anais Barisani	+43 1 26026 3857	A.BARISANI@unido.org g.onysko@unido.org gef@unido.org glo@unido.org f.haidara@unido.org

Organization - UNIDO Implementing Entity Coordinator					

Consultative processes

The concept was developed through an initial consultative process led by UNIDO and the National Committee on Ecology and Climate Change of the Republic of Uzbekistan. A multi-stakeholder consultation workshop was held on 18 June 2026 to present the project and gather feedback on climate priorities, institutional roles, adaptation solutions, financing barriers, and implementation arrangements. The consultation involved 9 participants (3 women and 6 men) representing 7 national institutions and organizations, with women accounting for 33 per cent of participants.

Participants included representatives from Uzhydromet, the Ministry of Agriculture, the Ministry of Water Resources, ICWC SIC, the Central Bank of Uzbekistan, the Entrepreneurship Development Company, and other national stakeholders. They confirmed the project's relevance and highlighted priorities including water scarcity, salinization, desertification, drought resilience, climate-resilient agriculture, and efficient water management, particularly in Karakalpakstan, Khorezm, the Fergana Valley, Muynak, and Surkhandarya. Stakeholders also recommended strengthening the involvement of key institutions, including the Ministry of Economy and Finance, AKIS, the Research Center for Combating Desertification, and financial institutions, and emphasized the need for user-oriented climate intelligence that supports decision-making by communities, farmers, SMEs, financial institutions, and local authorities.

These recommendations have been incorporated into the concept and will continue to inform project development. The initial consultation focused primarily on the project's technical and institutional design; environmental and social safeguards, gender, and community engagement will be addressed in greater detail during full proposal preparation.

During the full proposal phase, consultations will be expanded to national, regional, and community levels, engaging local authorities, women and youth organizations, farmer associations, SME networks, financial institutions, civil society organizations, and vulnerable communities. Dedicated consultations will inform the Environmental and Social Management Framework (ESMF), Gender Assessment, and Gender Action Plan, covering safeguards, grievance redress, equitable benefit-sharing, gender equality, and activity eligibility. Feedback will be documented in a consultation matrix and reflected in the final project design, implementation arrangements, monitoring framework, and safeguards instruments. The grievance redress mechanism will be presented in accessible formats and local languages before project implementation, with stakeholder feedback used to finalize its design.

Part I: Gender Assessment

1. Background and Methodology

This preliminary Gender Assessment has been prepared for the Adaptation Fund concept "Resilience innovation and scaling ecosystem (RISE) Uzbekistan: climate intelligence, adaptation solutions and finance for resilient communities". The assessment aims to identify key gender inequalities relevant to climate adaptation, climate-sensitive livelihoods, entrepreneurship, and access to finance in Uzbekistan, and to inform the design of gender-responsive project interventions. A more elaborate Gender Assessment and Gender Action Plan will be presented at the submission of the full proposal stage.The assessment is based on a review of national policy documents, World Bank[1] and UN reports[2], UN Women statistics[3], International Labour Organization (ILO) studies[4], and project stakeholder consultations described in the concept note. Particular attention was given to gender dimensions of climate vulnerability, women's participation in economic activities, access to finance, entrepreneurship, and decision-making in climate-sensitive sectors. The preliminary assessment is based primarily on a desk review of national policies, gender statistics and relevant analytical reports. Although the concept was informed by an initial technical stakeholder consultation, that consultation did not include sufficiently broad or dedicated engagement on gender issues. A participatory Gender Assessment will therefore be undertaken during full proposal preparation with gender-mandated institutions, women's organizations, women entrepreneurs and women from target communities.

2. Gender Context in Uzbekistan

Uzbekistan has made significant progress on gender equality in recent years, supported by the Law on Equal Rights and Opportunities for Women and Men, the Gender Equality Strategy, and increasing representation of women in public institutions. Women currently hold approximately 34.6 per cent of parliamentary seats and Uzbekistan has improved its standing in international gender rankings. Nevertheless, important gender gaps remain in economic participation, access to productive assets, entrepreneurship, and leadership positions.

Women are highly represented in education, health, and social sectors, but remain underrepresented in higher-paying industries, technology sectors, finance, and business leadership. According to the ILO, women in wage employment earn on average 25-35 per cent less than men. Traditional gender norms continue to assign women a disproportionate share of unpaid care and household responsibilities, reducing opportunities for entrepreneurship, skills development, and participation in decision-making.

Climate change compounds these inequalities. Women are often concentrated in climate-sensitive sectors such as agriculture, food processing, household water management, and informal rural enterprises. Increasing droughts, water scarcity, land degradation, salinization, and dust storms therefore create disproportionate burdens on women, particularly in rural areas and in regions affected by the Aral Sea crisis.

3. Gender, Climate Vulnerability and Adaptation

The project targets regions where climate risks are particularly acute, including Karakalpakstan, Khorezm, dryland regions, and irrigated agricultural areas. Women in these regions frequently face lower access to land ownership, agricultural inputs, finance, climate information, extension services, and technology adoption opportunities.

Climate-related impacts may increase women's workload through longer distances for water collection, reduced agricultural productivity, increased household care responsibilities, and reduced livelihood opportunities. Female entrepreneurs and women-led SMEs frequently face additional barriers related to collateral requirements, limited financial literacy opportunities, smaller professional networks, and reduced access to investment.

At the same time, women represent an important source of adaptation knowledge and innovation. Women entrepreneurs are increasingly active in agribusiness, food processing, climate-smart agriculture, digital services, and community-based enterprises. Strengthening women's participation in adaptation SMEs therefore represents both a climate resilience opportunity and a gender equality intervention.

4. Gender-Relevant Risks and Opportunities for the Project

The project presents substantial opportunities to enhance women's resilience and economic empowerment. Component 1 can improve women's access to localized climate information and early warning services.

[1] World Bank Country Gender Assessment Report: Uzbekistan

[2] Common Country Analysis | United Nations in Uzbekistan

[3] Country Fact Sheet | UN Women Data Hub

[4] The Gender Pay Gap in Uzbekistan: Recent Trends and Policy Implications | International Labour Organization

Component 2 can strengthen women-led adaptation SMEs and increase women's participation in adaptation value chains. Component 3 can improve access to climate finance and promote gender-responsive financial products. Component 4 can ensure that lessons on gender-responsive adaptation are captured and disseminated.
Potential risks include:

- Underrepresentation of women among supported SMEs.
- Limited participation of women in technical training and finance-related activities.
- Unequal access to grant financing due to collateral, networking, or information barriers.
- Digital exclusion affecting women's access to climate intelligence services.
- Persistence of gender stereotypes within participating institutions and enterprises.

These risks can be mitigated through targeted outreach, gender-sensitive selection criteria, gender-responsive training delivery, collection of sex-disaggregated data, and dedicated support to women-led enterprises.

5. Policy and Institutional Framework

The project aligns with Uzbekistan's Gender Equality Strategy, the Law on Equal Rights and Opportunities for Women and Men, the Law on Protection of Women from Harassment and Violence, and broader national commitments under the SDGs. The Family and Women's Committee, women entrepreneur associations, chambers of commerce, financial institutions, and development partners provide important entry points for implementation of gender-responsive activities.
Overall, the project is expected to contribute positively to women's economic empowerment, adaptive capacity, and participation in climate resilience decision-making. A gender-responsive implementation approach will be required throughout project execution to ensure equitable access to project benefits.

Part II: Gender Action Plan

Impact Statement:

Women and girls in climate-vulnerable regions of Uzbekistan have enhanced resilience, improved access to climate information and adaptation solutions, and increased participation in climate adaptation entrepreneurship and finance.

Outcome Statement:

Women entrepreneurs, women-led SMEs, and women beneficiaries participate equitably in project-supported climate intelligence, adaptation solution deployment, and adaptation finance activities.

Preliminary identified key actions, targets and indicators:

Key actions and targets	Indicators
1. Ensure that at least 40 per cent of SMEs supported under incubation, acceleration, and grant mechanisms are women-led or women-owned. 2. Ensure a minimum of 40 per cent of female participation in training, advisory services, climate intelligence activities, and stakeholder consultations. 3. Integrate gender-responsive selection criteria into SME screening, grant allocation, and finance ecosystem activities. 4. Develop gender-sensitive climate advisory tools and communication materials accessible to women in rural communities. 5. Collect and report sex-disaggregated data across all project indicators and beneficiary groups 6. Provide tailored mentoring, networking, and investment readiness support for women entrepreneurs. 7. Promote women's representation in project governance structures, including the Project Steering Committee and technical working groups. 8. Conduct annual reviews of gender performance and integrate findings into adaptive project management.	• Number and percentage of women beneficiaries. • Number and percentage of women-led SMEs supported. • Number of women receiving climate information and advisory services. • Number of women participating in capacity-building activities. • Volume of financing mobilized for women-led adaptation SMEs. • Percentage of project governance positions occupied by women.