



ADAPTATION FUND

AFB/PPRC.38/Inf.65
25 September 2026

Adaptation Fund Board
Project and Programme Review Committee
Thirty-eighth Meeting
Bonn, Germany, 19-23 October 2026

PROPOSAL FOR KAZAKHSTAN, TAJIKISTAN, UZBEKISTAN



ADAPTATION FUND

**ADAPTATION FUND BOARD SECRETARIAT
TECHNICAL REVIEW OF PROJECT PROPOSAL FOR
"INTEGRATED DROUGHT MANAGEMENT FOR CENTRAL ASIA (IDCA)"**

Project Title	Integrated Drought Management for Central Asia (IDCA)
Project ID	AF00000420
Category	Regular size project (over \$1 million)
Type	Regional project
Stage	Concept
Country	Regional (Kazakhstan, Tajikistan, Uzbekistan)
Implementing Entity	WMO
Financing Requested	USD 24,200,000.00
Reviewer	Camila Florez
Co-reviewer(s)	Camila Florez
IE Contact Person	Ana Laura Zuanazzi,Moyenda Chaponda,Petra Mutic,Valentin Aich

Secretariat's Overall Comment

The project "Integrated Drought Management for Central Asia (IDCA)" aims to operationalize the Central Asia Regional Drought Strategy through a coordinated regional approach that integrates monitoring and early warning, risk and impact assessment, and risk mitigation, preparedness and response.

The project includes a request for a project formulation grant and/or project formulation assistance grant of USD 111,000.

The first technical review raises some issues, such as the need to reword Outcomes and Outputs,

inadequate sustainability approach, inadequate stakeholder consultation, inadequate consistency with national plans and strategies for participating countries and lack of qualitative information in the initial gender assessment, review of results framework, alignment table, proper completion of projects components and financing table etc. as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.

The second technical review raises some issues, such as the Adaptation Fund Results Framework, Unidentified Sub-Projects (USPs) and the preliminary gender analysis as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.

Country Eligibility

Are all of the participating countries party to the Kyoto Protocol, or the Paris Agreement?

Response: Pending

Secretariat: Yes.

- Kazakhstan signed the Kyoto Protocol on March 12, 1999 and signed the Paris Agreement on August 2, 2016.
- Uzbekistan ratified the Kyoto Protocol on October 12, 1999 and signed the Paris Agreement on April 19, 2017.
- Tajikistan ratified the Kyoto Protocol on December 29, 2008, and signed the Paris Agreement on April 22, 2016.

Response: Yes

IE: Confirmed. Kazakhstan, Tajikistan and Uzbekistan are Parties to the Paris Agreement and meet this eligibility requirement.

Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?

Response: Yes

Secretariat: Yes

The three Central Asian nations of Kazakhstan, Uzbekistan, and Tajikistan exhibit a shared pattern of high exposure (particularly to increased warming and agricultural droughts), low adaptive capacity, and systemic inter-dependencies.

Response: Yes

IE: The Implementing Entity notes the Secretariat's confirmation.

Project Eligibility

Have the designated government authorities for the Adaptation Fund from each of the participating countries endorsed the project/programme?

Response: Yes

IE: The Implementing Entity notes the Secretariat's confirmation.

Does the length of the proposal amount to no more than fifty (50) pages for the project/programme concept, including its annexes?

Response: Not Cleared

IE: Updated

Response: Not Cleared

Secretariat: The proposal is 51 pages, including annexes; however, the proponent has also attached additional documents, such as the initial gender report, whose results should be included in the proposal's annex 4.

CAR2(NEW): Kindly ensure that all tables and figures have a caption. For example the table in Section II L (pg. 37) is missing a caption.

CAR3(NEW): Kindly add paragraph numbers to the proposal

Does the regional project / programme support concrete adaptation actions to assist the participating countries in addressing the adverse effects of climate change and build in climate resilience, and do so providing added value through the regional approach, compared to implementing similar activities in each country individually?

Response: Pending

Secretariat: Yes

However, amendments are required.

The project aims to integrate drought management across Kazakhstan, Tajikistan, and Uzbekistan by adopting a risk-informed action strategy that harmonizes early warning systems among the three countries, improves the management of shared water and climate risks, and establishes a durable foundation for drought resilience across Central Asia. The project builds added value through a regional approach.

As per Part II, Section A, the proposal supports concrete adaptation actions. A Theory of Change (TOC) diagram is included in Annex 2; however, the TOC narrative and its diagram should be further clarified. In particular the results chain requires strengthening, as several outputs are currently phrased as broad topics rather than clear, measurable deliverables.

Component 3 title appears to be overloaded, combining governance, policy, knowledge and gender.

The regional project contributes to the thematic focal area of disaster risk reduction and early warning systems and contributes to AF Strategic focus however the linkage of the project to the AF strategic focus is not stated.

CR3: Please revise the outcomes and outputs to ensure they are clearly formulated as results. Note that outputs

generally include a noun that is qualified by a verb describing positive change. Outputs should be framed as tangible products, mechanisms, services or capacity delivered. For example, 'National intersectoral drought coordination groups established, strengthened and operationalised.

CAR1: Please remove 'Gender action plans' as a standalone output since gender should be treated as cross-cutting and integrated across all components and activities, in line with the Gender Action Plan to be developed during the PFG.

CR4: Consider rewording 'Knowledge Management and Community of Practice' as a clearer standalone output. For example, 'Regional and national knowledge management systems and communities of practices for drought risk management established'.

CR5: Please amend the Theory of Change narrative and its diagram accordingly.

The revised diagram should include:

(i) the causal pathway from activities through outputs and outcomes to impact, with assumptions and risks identified at each step

CAR2: Terminal Evaluation should be completed 9 months after project closure. Please adjust the timeframe in Table 8 (page 21).

CAR3: Please explicitly state how the project components link to the AF's Strategic Objectives. Please ensure the Objective number and description are included at part II Section B.

Response: Not Cleared

IE: The Concept Note has been revised as follows:

CR3:

- The full results chain has been reformulated so that outcomes describe intended changes and outputs describe specific deliverables or operational capacities. For example, Output 3.1.2 has been revised to "National intersectoral drought coordination groups established, strengthened and operationalised."
- Component 3 has been streamlined and renamed to focus on drought governance, institutional capacity and knowledge systems. Gender equality and social inclusion are treated as cross-cutting design requirements across Components 1–3.

CAR1:

- Output 3.4.2 ("Gender action plans") has been removed. Gender-responsive activities, targets, indicators, responsibilities and budgets have instead been integrated across all relevant outputs and consolidated in the project Gender Action Plan developed during the PFG/full proposal stage.

CR4:

- Output 3.4.3 has been revised to "Regional and national knowledge management systems and communities of practice for drought risk management established and operational."

CR5:

- The ToC narrative and diagram has been revised to present the complete causal pathway from activities to outputs, outcomes and project impact, with the principal assumptions and risks shown at the relevant links.

CAR2:

- Table 8 has been revised to schedule the Terminal Evaluation for March 2033, nine months after the proposed June 2032 project closure.

CAR3:

- Part II, Section B and the AF alignment table now explicitly maps each project component and relevant outcome to the applicable AF Strategic Objectives, using the objective number and full description.

Response: Not Cleared

Secretariat: CR3: Cleared.

CAR1: Cleared.

CR4: Cleared

CR5: Not cleared. Please further review the theory of change to ensure that assumptions and risks are identified at each step.

CAR2: Cleared

CAR3: Not cleared. Please explicitly explain how each component, individually, links to the AF Strategic Objectives. For example, it is not clear how Components 1 and 3 support Output 3.1. It seems, for example, that Component 3 may be linked to Output 3.2 instead.

CAR4(NEW): General project objective is clear (pg 20), however it lacks explicit specific objectives. Please make the specific objectives explicit.

Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy of the Fund?

Response: Not Cleared

Secretariat: CAR9: Please ensure that the initial gender assessment provides qualitative and quantitative data for gender roles, activities, needs, and available opportunities and challenges or risks for men and women relevant to the project.

Response: Not Cleared

IE: CAR9: The Initial Gender Assessment has been strengthened and resubmitted as a single coherent annex. It includes country-specific quantitative and qualitative evidence for Kazakhstan, Tajikistan and Uzbekistan covering: women's and men's roles in agriculture, water management, household water security, hydrometeorological services and disaster risk management; access to land, irrigation, finance, extension services, technology and climate information; unpaid care and time burdens; representation and decision-making; female-headed households and labour-migration dynamics; and differentiated drought risks and adaptation needs.

The revision employs authoritative national statistics and strategies and relevant sources from national statistical agencies, UN Women, FAO, World Bank, WMO and other development partners. It will also clearly identify project entry points, including inclusive climate-information channels, women's representation in drought governance and community planning, equitable access to training and risk-financing instruments, and sex-disaggregated indicators. Evidence gaps to be addressed through PFG consultations with women's organisations, producer groups, government agencies and vulnerable communities are explicitly identified.

Response: Not Cleared

Secretariat:

As per Part II, Section C (pages 29-31), the concept note identifies environmental, social, and economic benefits to communities, with explicit reference to gender and youth. Pages 19-20, in the section Project Background and Context, highlight that the project directly benefits 'approximately 14 million drought-affected people across Kazakhstan, Tajikistan, and Uzbekistan, of whom about 50.6 percent are women'. Section C lacks quantitative

estimates to substantiate benefits. The concept note complies with the Gender Policy and provides an initial gender assessment as per Annex 4.

However the initial gender assessment is based on published statistics, data, and reports. In addition, Section C does not yet provide sufficient quantitative estimates to substantiate the anticipated benefits and does not include benefits or risks to Indigenous peoples and other vulnerable groups.

CAR5(NEW): Kindly outline quantitative economic, social and environmental benefits in Part II.C, whenever possible. When exact figures are not available, kindly include reasonable estimates or proxies to support the identified project's impact alongside a brief explanation of the method used for these calculations.

CAR6(NEW): Kindly disaggregate the stated target reach of 14 million drought-affected people across the three countries (page 19-20) into direct and indirect beneficiaries. Suggest creating a table.

- i. Explain the methodology that will be used to determine the estimated direct vs indirect beneficiaries and prevent double counting.
- ii. Ensure direct and indirect beneficiaries are clearly reflected in environmental, social, and economic benefit categories
- iii. Ensure that beneficiaries are also disaggregated by gender and age

CR6(NEW): Kindly clarify the mechanisms that will be used to ensure equitable distribution of project benefits across gender, age, and vulnerable groups.

CR7(NEW): Kindly consider moving elements of the paragraph "Avoiding or mitigating negative impacts" (pg. 31) to Part II Section L as it overlaps with the environmental and social risk discussion.

CAR7(NEW): Kindly include in Part II, section C, one succinct statement on whether the project will increase or decrease the vulnerability of beneficiaries, marginalized groups, vulnerable groups, or Indigenous peoples.

CAR8(NEW): Kindly correct the preliminary gender assessment

- i. Ensure that the preliminary gender analysis disaggregates the likely beneficiaries by gender, noting general differences regarding the roles and needs of women, men and other gender groups and possible different effects of the activity on them
- ii. Ensure the Initial gender assessment include consultations to women

CAR9: Please ensure that the initial gender assessment findings are included in Annex 4 (not in a separate file). The assessment should focus on the gender-related findings and ensure that it provides relevant qualitative and quantitative data, when available.

Is the project / programme cost-effective and does the regional approach support cost-effectiveness?

Response: Cleared

Secretariat: Please ensure that the fully developed proposal package includes a strengthened cost effectiveness analysis with project specific information based on the project outputs and activities including quantitative comparison of the cost-effectiveness of the proposed measures with alternative adaptation measures.

Response: Cleared

IE: Noted. During full proposal preparation, the analysis will be expanded using output- and activity-level costs, unit-cost benchmarks and quantitative comparisons with feasible alternatives, including avoided losses and the efficiency gains arising from shared regional systems and services.

Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments? If applicable, it is also possible to refer to regional plans and strategies where they exist.

Response: Pending

Secretariat: Yes.

However, further information is needed.

As per Part II, Section E, the concept highlights the NDC, and NAP as well as other relevant plans/programme documents. However, it only mentions Kazakhstan and Tajikistan.

CAR10: Kindly include the identified plans/instruments/strategies in a table listing for all three participating countries. The table should include at least the following columns:

- (i) specific name of the plan/strategy,
- (ii) years of implementation,
- (iii) goals/objectives,
- (iv) relevance with the proposed project, and
- (v) project's compliance status.

Please ensure that the table considers relevant strategies such as poverty reduction strategies, national sustainable development strategies, and sector related policies, where available. If farmers are a target group, then specify agricultural strategies and plans.

CR8: Apart from the objective of the strategy/plan, please explain its relevance to the proposed project, including its alignment with the existing plan or strategy. A suggested structure could be: 'The proposed project is aligned with [Plan XX], under [Specific Action XX], contributing to [Outcome XX].'"

Response: Not Cleared

IE: CAR10: Part II, Section E will be replaced with a structured alignment table covering Kazakhstan, Tajikistan and Uzbekistan, as well as the key regional instruments. For each instrument, the table will provide the official title, implementation period, relevant goal/action/outcome, specific relationship to IDCA activities and outcomes, and compliance/alignment status.

CR8: The country coverage has been revised and now includes, as applicable, NDCs, NAPs or national adaptation planning instruments, national development and poverty-reduction strategies, disaster-risk-reduction strategies, water and agricultural policies, gender strategies and hydrometeorological/early-warning plans. Each entry identifies the substantive alignment, i.e., the specific project output that contributes to a named action or outcome. Uzbekistan's instruments and alignment have been added in full.

Response: Not Cleared

Secretariat: CAR10: Not cleared. Thank you for the update. Please also include Uzbekistan's Sectoral Adaptation Plan for Agriculture 2025-2030 in the table.

CR8: Not cleared. Please revise the information provided to be more detailed and specific in explaining the IDCA's contribution to the plans' outcomes.

Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?

Response: Not Cleared

IE: no comment provided

Response: Not Cleared

Secretariat: No.

Part II, Section F (pg. 32-33) does not identify specific standards and regulations.

CAR11(NEW): Kindly provide a comprehensive table listing all applicable national technical standards (including Environmental Impact Assessments (EIAs), building codes, water quality regulations, and any other sector-specific regulations) for the proposed project across all three participating countries. The columns in the table should include:

- i. Specific name/number of the standard/regulation,
- ii. Goals/objectives
- iii. How it is related to the proposed project (mention specific project output)
- iv. Project's compliance status/approach
- v. Competent authority/authorities overseeing procedures. (suggested)

Is there duplication of project / programme with other funding sources?

Response: Not Cleared

IE: no comment provided

Response: Not Cleared

Secretariat: No.

Part II, section G (pg 33) includes in note #75 a list of regional and national initiatives in Central Asia; however it does not include a comprehensive analysis of potential overlap

CAR12(NEW): Kindly include a comprehensive table listing of projects that are or have been implemented in the three participating countries and are related or complementary to the proposed project. This includes regional projects. For each, please include the following details:

- i. Project title, Donors/Funding Entity, timeline
- ii. Description and Objectives
- iii. Main project interventions,
- iv. Specific location (region/country/county)
- v. Target Population
- vi. Lessons learned
- vii. Overlaps and synergies with the proposed project, including how the proposed project will build upon an

existing or previous project
viii. Duplication (yes or no, explain)

Does the project / programme have a learning and knowledge management component to capture and feedback lessons?

Response: Not Cleared

IE: no comment provided

Response: Not Cleared

Secretariat: Yes.

As per Part II, Section H (pg. 33-34), learning and knowledge management is embedded across all components to systematically capture, synthesize, and disseminate lessons for replication and scale-up. Component 3 (Output 3.4.3, pg. 28) includes a knowledge management system that will capture and synthesize lessons from Components 1 and 2,

CAR13(NEW): Please make the KM activities more explicit by either creating a sub-component under Component 3 that focuses on KM or creating a dedicated component for KM (i.e., Component 4). This allows the knowledge management budget to be clearly identified.

CR9(NEW): Please specify:

- i. How will the project keep track of experience gained
- ii. How frequently the experiences and lessons gained will be documented and tracked (monthly, quarterly etc)
- iii. Who will be responsible for tracking the experiences gained, how this will be done, and when the tracking will take place (e.g. an M&E Officer/ Knowledge Management Officer in the Project Management Unit).
- iv. How will the experience and lessons gained be shared across countries
- v. How the knowledge generated will be sustained after the project concludes.

CR10(NEW): The UNCCD Drought Community of Practice is mentioned three times in Part II, section A. It seems to be a very relevant mechanism already in place for regional peer learning. Kindly explain the UNCCD Drought Community of Practice, include a reference, and how the proposed project can potentially link to it (Part II, section A, pg, 28, outcome 3.4.3)

Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

Response: Not Cleared

IE: no comment provided

Response: Not Cleared

Secretariat: No.

As per Part II, Section I (pages 34-35), a consultation occurred at "Joint Workshop on Regional Cooperation in

Central Asia” in March 2024 brought together representatives from national hydrometeorological services, disaster risk management agencies, water and agriculture ministries, and regional organisations from Kazakhstan, Tajikistan, and Uzbekistan. This was followed by a survey conducted in November 2025 with Executing Entities (national meteorological services). Further consultation to be held with stakeholders during the PFG. There appears to be little influence from communities. The concept states that “Relevant groups including women, youth, people with disabilities and other vulnerable groups will be involved in further project development and refinement, ensuring a country- and region-driven approach with an emphasis on strengthening regional collaboration at the institutional and community levels.”

CR10(NEW): The concept note states “The ICDA project maintains a cross-cutting focus on vulnerable groups and gender-responsive adaptation”. However, limited evidence is provided to demonstrate how vulnerable groups have informed the initial project design. Please clarify the following:

- i. Whether vulnerable groups were consulted during the concept development and how have their views been incorporated.
- ii. How vulnerable groups will be identified and meaningfully engaged during subsequent consultations and project design. Please include in the concept note the names of the organisations, such as women’s groups, farmer groups, or other relevant civil society organisations, that will be consulted.
- iii. Please ensure a consultation is undertaken with the vulnerable groups and the Ministry responsible for gender to further inform the concept note and that these are well-documented in the Table advised in the CR below.

CR11(NEW): Please clarify whether a consultation occurred after the results of the technical survey were analysed as a form of validation session.

CR12(NEW): Please prepare a table that provides a comprehensive list of stakeholder consultations convened in the country. This list may be placed in the Annex and referenced in Section H and includes:

- i. The total number of attendees, disaggregated by sex, with background information to verify whether marginalized and vulnerable groups have been consulted. Please ensure the names of the stakeholders are also highlighted.
- ii. A summary of the subjects/issues discussed and any agreements reached.
- iii. Indicate how their interests have been incorporated in the project, including how gender and other vulnerable group considerations were addressed.

Please ensure the consultations are well-defined in the PFG so these are not overlooked.

CR13(NEW): The pre-concept and the associated PFG, indicated the intention to have a regional consultation. However, the concept note proposal makes no mention of the consultation and only that of a technical survey in November 2025. Please clarify if this regional consultation was held and present its results and how it informed the elaboration of the concept note.

Is the requested financing justified on the basis of full cost of adaptation reasoning?

Response: Pending

Secretariat: Yes.

However, further information is needed.

As per Part II, Section J (pages 35-36). the proposal reviews the baseline scenario and additionality to address

concerns of business-as-usual activities and explains why Adaptation Fund is needed to finance activities.

CAR14:

1. Confirm explicitly that all stated outcomes and outputs can be delivered with the requested Adaptation Fund financing and identified beneficiary contributions, without depending on the approval or implementation of other donor projects.
2. Please remove (additionality) in the sub headings of the section J related to action with AF resources.

Response: Not Cleared

IE: CAR14: Section J now confirms that all proposed outcomes and outputs are fully deliverable within the requested AF grant and the stated in-kind/beneficiary contributions and are not contingent on the approval, financing or implementation of any other donor-funded initiative. Complementary programmes are presented only as coordination opportunities or sources of lessons and baseline information, not as financing dependencies.

The “Additionality” subheadings have been replaced with “With Adaptation Fund resources” (or equivalent wording), while retaining a clear explanation of the climate-change-induced costs addressed by the project and the distinction from the baseline development scenario.

Response: Cleared

Secretariat: Yes.

CR14: Cleared. Section J confirms that all stated outcomes and outputs can be delivered with the requested Adaptation Fund financing and identified beneficiary contributions, without depending on the approval or implementation of other donor projects.

Is the project / program aligned with AF's results framework?

Response: Not Cleared

Secretariat: As per Part III, Section A, there are some discrepancies in Table 9 ‘alignment with the Adaptation Fund Strategic Results Framework’ (pages 41-42). The Project Objective Indicators lack measurable criteria and targets; the Fund Outcome Indicators do not match the AF Results Framework and objective; and outcome-level budgets are inaccurate.

CAR15(NEW): Kindly make corrections to Table 9:

- i. The Project Objective Indicators should be rephrased to include measurable criteria and targets, for example: “number of communities that benefited from drought monitoring and early warning system”
- ii. Revise the Fund Outcome and Output indicators to align with those established in the Adaptation Fund Results Framework. Please use the exact wording of the Fund Outcome Indicators as outlined in the guidance: <https://www.adaptation-fund.org/document/alignment-with-adaptation-fund-results-framework-template-and-guidance-dec-2025/>
- iii. The “Total outcome level grant amount” and “Total output-level grant amount” should not include IE fees and EE costs; should align with the Project Components and Financing in Table 7 in Part I. Please refer to CAR5; and should be the sum cost of project objectives (upper part of the table) or the sum of project objectives (lower part of the table)
- iv. Please include specific project objectives; please see CAR7 (ii)
- v. Please ensure that the grant amount for each project outcome in Table 9 is consistent with the amounts in Table 7 in the next submission. Table 7 is missing cost per outcome.

Has the sustainability of the project/programme outcomes been taken into account when designing the project?

Response: Pending

Secretariat: No.

As per Part II, Section K (page 36), the proposal presents a sustainability narrative covering institutional and financial sustainability.

CAR15: Please ensure all key areas of sustainability are addressed, including but not limited to economic, social, environmental, institutional, and financial.

- i. [Institutional and social sustainability], which organisation(s) will be responsible for the continuation of the project's activities? Will these responsibilities be formalised through a commitment or MOU signed?
- ii. [Social sustainability], how will communities and vulnerable groups participate not only in consultations, but also in decision-making roles?
- iii. [Financial sustainability], the government's commitment to financing maintenance and other recurrent costs, as well as any commitments expected from partners.

CR14: Kindly describe the arrangements required to ensure the sustainability of the project's benefits beyond its completion. This should include, but not be limited to, the regulatory, institutional, and financial resources needed to maintain outcomes as well as operations and maintenance.

If certain sustainability details are fully addressed during the full proposal stage, please indicate this in the narrative of Section K.

Response: Not Cleared

IE: CAR15: Section K has been expanded under five explicit headings: institutional, financial, economic, social and environmental sustainability.

The revised section identifies the proposed post-project custodians of each major system and service, including national hydrometeorological services, relevant disaster-risk, water and agricultural authorities, national intersectoral coordination groups, the designated regional mechanism/RCC and participating local institutions. Responsibilities for data systems, equipment, forecasts, coordination mechanisms, community plans and nature-based solutions will be incorporated into institutional mandates and formalised through implementation agreements, MOUs or equivalent commitments during full proposal preparation.

CR14: The revised section also describes: community and vulnerable-group representation in planning, governance and monitoring bodies; capacity transfer and local ownership arrangements; environmentally sound maintenance and e-waste provisions; recurrent staffing, calibration, data, communications and operations-and-maintenance costs; proposed government budget allocations and partner commitments; and economic sustainability through cost-effective services and resilient livelihood/risk-financing mechanisms. Details requiring country confirmation will be clearly identified for validation and documentation during the PFG/full proposal stage.

Response: Not Cleared

Secretariat: CAR15: Not cleared.

- I. Kindly specify the type and modes of representation envisioned for communities and vulnerable groups.

li. Please make sure to name each national and regional organization in the full proposal stage.

CR14: Cleared. Further details will be provided during full proposal stage regarding the arrangements to ensure the project's benefits go beyond its completion,.

Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

Response: Pending

Secretariat: Yes.

However further information is required.

As per Part II, Section L (pages 37-39), the concept identified potential environmental and social impacts and risks against the 15 ES principles. The concept note classifies the project as Category B. Notably some relevant information on gender is dispersed throughout the concept note and its annexes. Pages 9-11 refers to gender and social inclusion providing some qualitative and qualitative data, primarily at the national and sectoral levels. An initial gender assessment was undertaken which appears to be largely qualitative with no supporting evidence/references and Annex 4 is a summary of the initial gender assessment.

CAR16: Please include a statement that the project will be in line with AF's E&S and Gender Policy.

CAR17: Please note that ESP 1, 4 and 6 always apply and assessments may be required. Therefore, the column "No further assessment required" should be unchecked. Please ensure if assessments are required that the column is left blank.

CR14: Please clarify any transboundary risks that may occur (if any) or if these were considered.

CAR18: Kindly include an updated Initial Gender Analysis/Assessment in the concept note as follows:

- i. Ensure each country is reflected in the assessment
- ii. Please ensure the assessment reflects statistics as well as supporting evidence (citing national reports, key informant interviews etc) that highlight differences and disparities between men, women, access to resources and knowledge, potential entry points for equal participation and benefits for women and men, description of local norms and cultural practices shaping gender relations in the project.
- iii. Please ensure that the Initial Gender Assessment is either consolidated into a single, coherent gender assessment document or section within the proposal with the relevant quantitative and qualitative gender data.

Response: Not Cleared

IE: CAR16: Section L will explicitly state that IDCA will be designed and implemented in accordance with the Adaptation Fund Environmental and Social Policy and Gender Policy.

CAR17: The ESP screening table has been corrected so that Principles 1 (Compliance with the Law), 4 (Human Rights) and 6 (Core Labour Rights) are treated as applicable and the "No further assessment required" cells are left unchecked/blank. The revised screening narrative identifies the additional assessment and management measures to be completed during the PFG/fully-developed proposal stage.

CR14: The transboundary-risk discussion has been expanded. It distinguishes the project's intended positive transboundary benefits from possible risks associated with cross-border data governance and access, inconsistent warning protocols, downstream or cross-border effects of site-specific water/land interventions, exclusion from regional services, and the handling of shared-basin information. The full proposal's ESIA/ESMP

process will screen pilot locations and cumulative/transboundary effects, apply no-harm and national legal requirements, establish data-sharing and escalation protocols, and provide accessible grievance channels. No large-scale infrastructure or reallocation of transboundary water is proposed.

CAR18: The gender information has been consolidated in one updated Initial Gender Assessment covering all three countries, with cited quantitative and qualitative evidence, analysis of gender roles and norms, access to assets/services/information, participation and decision-making, differentiated risks, and practical entry points for equal participation and benefits. The assessment informs cross-cutting activities, the results framework and the GAP.

Response: Not Cleared

Secretariat: CAR16: Cleared.

CAR17: Not cleared. Please ensure that if assessments are required, the column is left blank.

CR14: Not cleared. Please include the transboundary risk considerations within the screening table

CAR18: Not cleared. It seems the reviewer's comments were included in Annex 4 within the gender assessment summary, but the request was not addressed.

CAR19 (NEW):

- i. For all principles for which impacts or risks were identified, and for Principles 1, 4, and 6 (which always apply), such impacts or risks should be described in the third column, along with mitigation measures. Many of the principles in the table do not include mitigation measures. Please address.
- ii. Risks (third column) should be stated clearly. E.g.: instead of saying "The project will promote healthy soils and empower local farmers" you may say "There's a risk that agrochemical waste may impact soil and water if not managed".
- iii. Ensure screening table has a number and caption.

CAR20(NEW): Kindly clarify whether any activities/components will be treated as Unidentified Sub-Projects (USPs) under AF guidance. If yes, please explain which activities would be considered USPs, why, and how USP risks will be screened and managed prior to implementation (including how this will be reflected in the ESMP/ESIA scope, stakeholder engagement, and grievance mechanisms). Please add this clarification in Section L, when discussing ESMP.

CAR21(NEW): Indigenous Peoples are present in Kazakhstan (e.g., Kazakhs), Tajikistan (e.g., Tajiks, Pamiris), and Uzbekistan (e.g., Karakalpakstan). It is not clear why their status and presence have not been checked at this stage of the process, and why their needs and priorities have not been assessed. Please ensure that IPs are consulted and assessment of risk and mitigation is consistent with findings.

Does the project promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms?

Response: Cleared

IE: The Implementing Entity notes the Secretariat's confirmation.

Resource Availability

Is the requested project / programme funding within the funding windows of the regional projects/programmes?

Response: Pending

Secretariat: Yes

Response: Cleared

IE: The Implementing Entity notes the Secretariat's confirmation.

Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 10 per cent of the project/programme for implementing entity (IE) fees and at or below 10 per cent of the project/programme cost for the execution costs?

Response: Pending

Secretariat: Yes. The Implementing Entity Management Fee is at 10% for the regional project. However, figures do match across components table and budget. The figures in Table 9 (pages 41-42) should only reflect the sum of all project components and not include EE and IE costs. Table 7 should include a budget line per output.

CAR22:

1. Please include a budget line per output level for Table 7 as this will ensure there is consistency with Table 9.
2. At Table 7 please replace "all participating countries" with the country names.

CAR23: Please amend the 'Total objective level grant amount' and 'Total outcome level grant amount' to reflect the sum of project components.

CR16: Please revise the PFG start and completion dates.

Response: Pending

Secretariat: Yes. The Project Execution Costs are at 9.1% and IE fee is at 10 %.

Response: Not Cleared

IE: The financing tables and PFG form have been revised as follows:

CAR22:

- Table 7 will provide a distinct budget allocation for every output and will name Kazakhstan, Tajikistan and Uzbekistan instead of “all participating countries”. Output-level allocations will sum to the applicable component total.
- Table 9 will show only the USD 20.0 million allocated to Components 1–3 and will exclude the USD 2.0 million execution cost and USD 2.2 million IE fee. The total objective-level and outcome-level grant amounts will each be corrected to the sum of the component grants.

CR22:

- Component, output, execution-cost, IE-fee and total-request figures have been revised and now reconcile.

CR16:

- The PFG chronology will be corrected. The current form has a completion date preceding the start date; feasible start and completion dates will be agreed with WMO and entered consistently throughout the package before resubmission.

Response: Not Cleared

Secretariat: CAR22: Cleared.

CAR23: Not cleared. Please use the title ‘Total outcome level grant amount’ as requested.

CR16: Cleared.

Eligibility of IE

Is the project/programme submitted through an eligible Multilateral or Regional Implementing Entity that has been accredited by the Board?

Response: Pending

Secretariat: Yes.

The IE is listed as accredited and the accreditation expired on 30 October 2027.

Implementation Arrangements

Is an explanation and a breakdown of the execution costs included?

Response: Cleared

Secretariat: Not applicable at CN stage.

Is a detailed budget including budget notes included?

Response: Cleared

Secretariat: Not applicable at CN stage.

Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?

Response: Cleared

Secretariat: Not applicable at CN stage.

Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?

Response: Cleared

Secretariat: Not applicable at CN stage.

Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?

Response: Cleared

Secretariat: Not applicable at CN stage.

Is a disbursement schedule with time-bound milestones included?

Response: Cleared

Secretariat: Not applicable at CN stage.

CONCEPT NOTE FOR REGIONAL PROJECT

PART I: PROJECT INFORMATION

Title of Project: Integrated Drought Management for Central Asia (IDCA)

Countries: Kazakhstan, Tajikistan, Uzbekistan

Thematic Focal Area¹: Disaster risk reduction and early warning systems

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: World Meteorological Organization (WMO)

Executing Entities: Central Asia Regional Environmental Centre (CAREC), Global Water Partnership Organisation (GWPO), Global Water Partnership Central Asia and Caucasus (GWP CACENA), Food and Agriculture Organization of the United Nations (FAO), National Meteorological and Hydrological Services (NMHSs):

Kazakhstan: Republican State Enterprise (RSE) (Kazhydromet); **Tajikistan:** Agency for Hydrometeorology of the Committee for Environmental Protection under the Government of the Republic of Tajikistan; **Uzbekistan:** Agency of Hydrometeorological Service under the National Committee on Ecology and Climate Change of the Republic of Uzbekistan (Uzhydromet)

Amount of Financing Requested: 24 200 000 (in U.S Dollars Equivalent)

Project Formulation Grant Request: Yes ☒ No ☐

Amount of Requested financing for PFG: 111,000 USD (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes ☒ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file, check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>

Stage of Submission:

- ☐ This concept proposal has been submitted before
- ☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: 4/28/2025

Please note that concept note documents should not exceed 50 pages, including annexes.

¹ Thematic areas are food security; disaster risk reduction and early warning systems; transboundary water management; innovation in adaptation finance.

Table of contents

PART I: PROJECT INFORMATION	1
PART II: PROJECT JUSTIFICATION	22
A. Description of project/programme components	22
B. Description of innovative solutions.....	29
C. Economic, social, and environmental benefits	30
D. Project/programme cost-effectiveness.....	32
E. Consistency with national strategies	34
F. Alignment with technical standards	35
G. Duplication of other funding sources	35
H. Learning and knowledge management.....	36
I. Consultative process	37
J. Justification for funding.....	37
K. Sustainability of the project	38
L. Environmental and social impacts	39
PART III: IMPLEMENTATION ARRANGEMENTS	43
A. Alignment with AF Strategic Results Framework	43
PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY	46
ANNEX 1: LETTERS OF ENDORSEMENT	47
ANNEX 2: THEORY OF CHANGE	48
ANNEX 3: Initial consultation report	49
ANNEX 4: Initial gender assessment	50

List of figures

Figure 1. Locality and topography of Central Asia	5
Figure 2. Present (A) and future (B) Köppen-Geiger classification for Central Asia	12
Figure 3. Regional and national water-related stress indicators (2020-2022 average)	13
Figure 4. Frequency of severe drought in Central Asia between 1984-2023 in areas where 30% of the cropland is affected	14
Figure 5. Conceptual summary of three key challenges facing the Central Asian region.....	18

List of tables

Table 1. Selected demographic indicators for the three target countries.....	7
Table 2. Selected socioeconomic indicators for the three target countries.....	8
Table 3. Selected gender indicators for the three target countries	10
Table 4. Comparative trends in national agricultural water withdrawal (2020-2022 average)	13
Table 5. Climatology and vulnerability summary for the three target countries	15
Table 6. Overview of national hydrometeorological services in the three target countries	17

Table 7. Overview of project components, expected outcomes, outputs, geography, and budget..... 20

Table 8. Projected project calendar 21

Table 9. Overview of alignment with the Adaptation Fund Strategic Results Framework..... 43

List of acronyms

CAREC	Regional Environmental Centre for Central Asia	MRV	Monitoring, Reporting and Verification
CDM	Clean Development Mechanism	NAP	National Adaptation Plan
CIMH	Central Asian Institute for Hydrometeorology	NCC	National Climate Change
CIS	Commonwealth of Independent States	NDC	Nationally Determined Contribution
COP	Conference of the Parties	NWP	National Water Partnership
DRR	Disaster Risk Reduction	OECD	Organisation for Economic Co-operation and Development
EWS	Early Warning System	PSC	Project Steering Committee
FAO	Food and Agriculture Organization of the United Nations	RBO	River Basin Organization
FDP	Fully-Developed Proposal	RCM	Regional Climate Model
GCF	Green Climate Fund	RSO	Regional Servicing Office
GDP	Gross Domestic Product	SDG	Sustainable Development Goal
GHG	Greenhouse Gas	SRF	Strategic Results Framework
GWP	Global Water Partnership	SST	Sea Surface Temperature
HDI	Human Development Index	UNCCD	United Nations Convention to Combat Desertification
IPCC	Intergovernmental Panel on Climate Change	UNDP	United Nations Development Programme
IRBM	Integrated River Basin Management	UNEP	United Nations Environment Programme
IWMI	International Water Management Institute	UNFCCC	United Nations Framework Convention on Climate Change
LIC	Low-Income Country	UNDRR	United Nations Office for Disaster Risk Reduction
LLDC	Landlocked Developing Country	WASH	Water, Sanitation and Hygiene
M&E	Monitoring and Evaluation	WFP	World Food Programme
MDB	Multilateral Development Bank	WHO	World Health Organization
MHE	Ministry of Hydropower and Energy	WMO	World Meteorological Organization
MIC	Middle-Income Country	WRM	Water Resources Management

Project Background and Context

The proposed three-country regional project targets the Central Asian nations of Kazakhstan, Uzbekistan, and Tajikistan (Figure 1).



Figure 1. Locality and topography of Central Asia^{2,3}

Regional socioeconomic & geopolitical context

Central Asia is defined by its continental climate, extensive arid and semi-arid landscapes, and shared dependence on transboundary river systems. The region's distance from the ocean contributes to large seasonal and daily temperature variations and erratic precipitation patterns, with snowfall serving as a critical source of freshwater during spring and summer. The Syr Darya and Amu Darya river basins, originating from the glacier-fed mountain ranges in the east and south, form the hydrological backbone of the region and underpin its water, energy, and agricultural systems⁴. Recent decades have seen accelerating climate-induced shifts that exacerbate existing socioeconomic vulnerabilities in the region. Increased atmospheric temperatures and decreasing snowfall at higher elevations are altering the seasonal balance between snow and rainfall⁵. Reduced snow accumulation and earlier snowmelt are disrupting hydrological cycles, heightening seasonal water variability and intensifying desertification processes⁶. Accelerated glacier retreat is further changing river runoff dynamics, with “peak water” projected around mid-century, after which annual water flow will decline⁷.

² Free World Maps. (2021). *Physical Map of Central Asia*. [Online]. Available: <https://www.freeworldmaps.net/asia/central/centralasia-physical-map.jpg>

³ The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the MIE, EEs, or other project stakeholders.

⁴ Muccione, V., and Cassara, M. (2019). *The climate-cryosphere-water nexus in Central Asia*. Nexus Brief, 8. [Online]. Available: <https://docclimate.short.gy/nR3Gnt>

⁵ World Meteorological Organization. (2021). *State of the Climate in Asia 2021*. [Online]. Available: <https://docclimate.short.gy/RicLHj>

⁶ Intergovernmental Panel on Climate Change. (2021). *Climate Change 2021: The Physical Science Basis - Summary for Policymakers*. [Online]. Available: <https://docclimate.short.gy/mJK8tO>

⁷ Muccione, V., and Cassara, M. (2019). *The climate-cryosphere-water nexus in Central Asia*. Nexus Brief, 8. [Online]. Available: <https://docclimate.short.gy/nR3Gnt>

Rationale for the regional approach

Against this backdrop, a regional project approach delivers distinct advantages and value-add that cannot be achieved through individual national projects. The three participating countries share transboundary river systems, interconnected energy networks, and similar exposure to climate-related hydrological stress. Their economies, food systems, and hydropower generation cycles are linked by seasonal water flows governed by the Amu Darya and Syr Darya basins. Increasing upstream temperature and glacier retreat directly alter downstream water availability, making cross-border coordination indispensable for sustainable adaptation.

By addressing these challenges through a unified regional modality, the project supports coherent water and climate risk management across multiple jurisdictions, facilitates economies of scale in hydrometeorological modernisation, and promotes data interoperability between national systems. A regional mechanism under the Adaptation Fund framework reduces duplication of effort, strengthens peer learning, and ensures that upstream–downstream dependencies are managed collectively rather than competitively. Region-wide investment in monitoring networks and forecasting systems will enable harmonised early warning coverage, while shared knowledge platforms will foster joint policy development and harmonised adaptation planning. This regional model also enhances cost-effectiveness in comparison with isolated national interventions. Pooling technical expertise and infrastructure such as radar, upper-air observation, and data processing systems to lower overall investment costs and improve regional forecasting accuracy. Moreover, joint implementation advances policy coherence under emerging regional frameworks such as the Central Asia Climate Change Adaptation Strategy (2024), ensuring consistency with National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs). The approach thus provides both efficiency and equity benefits, supporting shared adaptation outcomes for communities and institutions that depend on the same transboundary water, energy, and agricultural systems.

Regional socio-economic profile

Central Asia has undergone profound social and economic transformation since 2000, with the combined economies of Kazakhstan, Tajikistan, and Uzbekistan expanding more than sevenfold through trade reforms, rising domestic demand, and favourable commodity markets. Despite these gains, growth remains uneven, marked by structural dependence on natural resources, exposure to external price volatility, and limited fiscal buffers⁸. Kazakhstan has transitioned into resource-based upper-middle-income economy, while Tajikistan, and Uzbekistan continue to rely heavily on agriculture, remittances, and narrow export bases⁹. These diverse economic systems remain interconnected through regional trade and water–energy exchange, and their shared vulnerability to climate shocks underscores the need for coordinated adaptation measures.

Hydrometeorological extremes such as more frequent droughts, intensified rain-on-snow events, and flooding are already amplifying regional livelihood insecurity¹⁰. Droughts weaken pasture regeneration, shorten grazing cycles, and accelerate land degradation in southern Kazakhstan and Uzbekistan^{11,12}. This scenario drives overgrazing and depletes scarce water resources, deepening rural poverty and fuelling localised resource conflicts. Downstream Tajikistan faces water variability threatening both irrigation and hydropower reliability¹³. In Uzbekistan, recurrent droughts and heatwaves have begun undermining yields of key export crops, including cotton, which directly affects national employment and export revenue¹⁴.

The region's economies differ sharply — Kazakhstan is a resource-based upper-middle-income economy, while Tajikistan, and Uzbekistan retain large agricultural and labour-exporting sectors. Industrial and service activities dominate in the higher-income economies, whereas agriculture sustains

⁸ World Bank. (2023). *Sluggish Growth, Rising Risks. Europe and Central Asia Economic Update (Fall 2023)*. [Online]. Available: <https://doclimate.short.qv/5Tu1VL>

⁹ Eurasian Development Bank. (2022). *The Economy of Central Asia: A Fresh Perspective*. [Online]. Available: <https://doclimate.short.qv/utscnS>

¹⁰ World Meteorological Organization. (2021). *State of the Climate in Asia 2021*. [Online]. Available: <https://doclimate.short.qv/RicLHJ>

¹¹ Nandintsetseg, B., Chang, J., Sen, O. L., Reyer, C. P. O., Kong, K., Yetemen, O., Clais, P., & Davaadalai, J. (2024). Future drought risk and adaptation of pastoralism in Eurasian rangelands. *NPJ Climate and Atmospheric Science*, 7(1). [Online]. Available: <https://doi.org/10.1038/s41612-024-00624-2>

¹² Ministry of Ecology and Natural Resources of the Republic of Kazakhstan. (2023). *Updated Nationally Determined Contribution of the Republic of Kazakhstan to the Global Response to Climate Change*. [Online]. Available: <https://doclimate.short.qv/qmf457>

¹³ Republic of Tajikistan. (2021). *The Updated NDC of the Republic of Tajikistan*. [Online]. Available: <https://doclimate.short.qv/iF00xR>

¹⁴ Republic of Uzbekistan. (2021). *Updated Nationally Determined Contribution*. [Online]. Available: <https://doclimate.short.qv/0qAn66>

rural livelihoods in the poorer ones¹⁵. Despite this diversity, all countries remain highly exposed to external demand fluctuations, commodity price shocks, and structural constraints such as geographic isolation and limited export diversification¹⁶.

Agriculture continues to underpin food security and rural income. It employs 45 % of the workforce in Tajikistan and around 25 % in Uzbekistan and indirectly sustains millions of smallholder households. However, the sector's dependence on shared water and land resources—combined with deteriorating irrigation infrastructure and persistent water scarcity—reinforces its vulnerability to climate variability¹⁷. These dynamics are both economic and geopolitical: water insecurity and energy dependence connect national development risks across borders. Economic resilience in one country is thus tied to effective regional water governance and resource-sharing arrangements¹⁸.

National socioeconomic diversity and structural characteristics

While the Central Asian states share hydrological and climatic systems that bind their economies and livelihoods, they also exhibit pronounced differences in demographic structure, resource endowment, and development status. Understanding these contrasts is fundamental for assessing adaptive capacity and identifying differentiated entry points for resilience building within a regional framework.

Demographic trends and rural dependency

Demographic diversity across the three participating countries (Table 1) highlights asymmetries in population distribution, spatial density, and human capital that directly shape exposure and vulnerability to climate stressors. Kazakhstan, occupying 2 724 900 km² of land, is the region's largest country yet has a comparatively modest population of 20.2 million. Uzbekistan, by contrast, has more than 37 million inhabitants despite a land area almost six times smaller while Tajikistan is small and densely populated

Population growth rates remain high in Tajikistan (2.2%) and Uzbekistan (2.1 %), compared to a moderate 1.3 % in Kazakhstan. These high-growth settings experience mounting pressure on already limited land and water resources, a key determinant of climate vulnerability. Rural population shares in greatest in Tajikistan (71%), reflecting its agrarian character, whereas Kazakhstan is predominantly urban (37% rural). Educational attainment is relatively high across the region, led by Kazakhstan at 13.6 average years of schooling, while the others range between 12 and 12.5 years. Life expectancy within the region is relatively even around 70, suggesting similar baseline health conditions. The three target countries differ in terms of demographic composition, rural dependency, and human capital – factors which are closely linked to differences in adaptive capacity. More urbanised nations with diversified employment structures, such as Kazakhstan, generally have greater institutional and fiscal resilience to manage climate risks. Conversely, countries with high rural concentration, such as Tajikistan, remain more exposed to climate-induced shocks in agriculture-dependent regions.

Table 1. Selected demographic indicators for the three target countries

Parameter	Kazakhstan	Tajikistan	Uzbekistan
Size (km ²)	2 724 900	142 550	448 978
Total population (million, 2024)	20.2	10.4	37.2
Annual population growth rate (% , 2024)	1.3%	2.2%	2.1%
Rural population (% of total, 2024)	37.3%	71.1%	49.0%
Education (mean years of schooling, 2024) ¹⁹	13.6	12.1	12.5
Life expectancy (years, 2024)	70.3	69.7	69.6

Socioeconomy

The three economies are at different stages of transition but share the legacy of natural resource dependence and limited diversification. As shown in Table 2, Kazakhstan leads with a GDP

¹⁵ Asian Development Bank. (2023). *Asian Development Outlook September 2023: Caucasus and Central Asia*. [Online]. Available: <https://doclimate.short.gy/095w5F>

¹⁶ Organisation for Economic Co-operation and Development. (2018). *Enhancing Competitiveness in Central Asia: Competitiveness and Private Sector Development Series*. [Online]. Available: <https://doclimate.short.gy/pMXuzd>

¹⁷ Eurasian Development Bank. (2022). *The Economy of Central Asia: A Fresh Perspective*. [Online]. Available: <https://doclimate.short.gy/utscnS>

¹⁸ Wesch, S. (2024). Central Asia: Challenges and Opportunities by Way of the Middle Corridor. *Climate. Changes. Security: Navigating Climate Change and Security Challenges in the OSCE Region*, 175-193. [Online]. Available: <https://doclimate.short.gy/qbeVWu>

¹⁹ Average number of completed education years among adults aged 25+.

of USD 286 billion and the highest per capita (USD 14 187), reflecting a mature and diversified economy. Conversely, Tajikistan remains a lower-income country with small domestic markets and heavy reliance on remittances. Uzbekistan occupies an intermediate position, with strong aggregate output (USD 115 billion) but lower productivity per capita due to its large population.

Rapid output growth in Tajikistan (8.4%) signifies economic catch-up, though from a narrow base and within a structurally vulnerable economy heavily influenced by external remittance inflows. In contrast, Kazakhstan shows more measured growth (4.8%) as a reflection of its diversified industrial and service sectors. The share of agriculture in total GDP varies sharply from only 4% in Kazakhstan to over 25% in Tajikistan and 19% in Uzbekistan, indicating differential exposure to climate shocks affecting water and land resources.

Poverty and inequality indicators underscore persistent disparities. Multidimensional poverty is highest in Tajikistan (7.4 % of the population) and minimal elsewhere. Income inequality ranges from a GINI index of 29.2 in Kazakhstan to 36.1 in Tajikistan. The Human Development Index (HDI) values mirror these gradients – Kazakhstan (0.837; 60th globally) demonstrates near-high human development, while Tajikistan (0.691; 128th globally) remains in the medium category.

Table 2. Selected socioeconomic indicators for the three target countries

Parameter	Kazakhstan	Tajikistan	Uzbekistan
GDP (USD billion, 2024) ²⁰	286	14	115
GDP (Purchasing Power Parity, Int\$ billion, 2024) ²¹	834	57	432
GDP per capita (USD, 2024) ²²	14 187	1 368	3 093
GDP growth rate (% , 2024) ²³	4.8%	8.4% ²⁴	6.5%
Agriculture share of GDP (% , 2024)	4.2%	25.2%	19.2%
Multidimensional poverty (number of people; % of total population, 2022) ²⁵	91,000; 0.5%	758,000; 7.4%	604,000; 1.7%
GINI coefficient ²⁶	29.2 (2021)	36.1 (2023)	34.6 (2024)
Human Development Index (index; global ranking, 2023) ²⁷	0.837; 60th	0.691; 128th	0.740;107th

The structural configuration of these Central Asian economies, i.e., dominated by resource exports, agriculture, and remittances, constrains their adaptive flexibility and exposes them to international market volatility and climate impacts. These national differences present both a challenge and an opportunity for regional adaptation planning. Countries with stronger fiscal and institutional systems can anchor regional investment and capacity-building efforts, while those with high rural dependency and poverty can benefit from targeted support for livelihood diversification, social protection, and resource management. Taken together, demographic growth, uneven economic development, and persistent inequality create a shared imperative for cooperative climate adaptation.

Socioeconomic fragility and adaptive capacity constraints

Across the region, socioeconomic vulnerabilities intersect with climate and environmental pressures to shape differential levels of adaptive capacity. The combined effects of rural dependency, income inequality, institutional constraints, and sectoral exposure to natural resource degradation have created a development landscape in which climate change acts as a powerful stress multiplier.

The structural composition of the three participating countries makes their economies particularly sensitive to climatic shocks. Agriculture continues to play a central economic and social role in Tajikistan and Uzbekistan, where it contributes more than one-fifth of GDP and remains the primary source of rural

²⁰ Asian Development Bank (2025). *Key Indicators for Asia and the Pacific 2025*. [Online]. Available: <https://www.adb.org/publications/key-indicators-asia-and-pacific-2025>

²¹ *Ibid.*

²² *Ibid.*

²³ *Ibid.*

²⁴ World Bank. (2025). *Tajikistan Economic Update: Focusing on Digital Transformation of Trade in Tajikistan (Summer 2025)*. Washington, DC: The World Bank. [Online]. Available: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099713007282542605>

²⁵ United Nations Development Programme (UNDP) & Oxford Poverty and Human Development Initiative (OPHI). (2024). *Global Multidimensional Poverty Index 2024: Poverty amid conflict*. UNDP and OPHI. [Online]. Available: <https://hdr.undp.org/content/2024-global-multidimensional-poverty-index-mpi>

²⁶ World Bank. (2024). *Gini Index (World Bank estimate)*. World Development Indicators, Poverty and Inequality Platform. [Online]. Available: <https://data.worldbank.org/indicator/SI.POV.GINI>

²⁷ Asian Development Bank (2025). *Key Indicators for Asia and the Pacific 2025*. [Online]. Available: <https://www.adb.org/publications/key-indicators-asia-and-pacific-2025>

employment. In these contexts, even moderate shifts in water availability, temperature, or precipitation patterns can cause significant livelihood disruptions and food insecurity. Kazakhstan's economy, although more diversified, remains vulnerable to price volatility in exports such as oil and metals that are themselves sensitive to global decarbonisation trends. As summarised in Table 2 above (Selected socioeconomic indicators for the three target countries), the distribution of GDP composition, poverty incidence, and inequality reflects the systemic dependence of rural livelihoods on climate-sensitive sectors, particularly in Tajikistan and Uzbekistan.

Social inequalities reinforce these structural vulnerabilities. Multidimensional poverty is still concentrated in rural areas, and gaps in access to infrastructure, credit, and markets limit adaptive options for low-income households. In Tajikistan, where 7.4% of the population experiences multidimensional poverty, limited financial inclusion and dependence on natural resources constrain risk management capacity. By contrast, Kazakhstan possesses greater fiscal resources, yet these are unevenly distributed across regions, mirroring disparities in service provision and human development outcomes.

Institutional capacity presents a further constraint. Mechanisms for coordinated natural resource management remain fragmented across countries, and policy frameworks addressing water, agriculture, and energy are not yet harmonised at the transboundary level. Weak integration between local and national governance structures undermines consistency in applying adaptation measures. This results in uneven implementation of early warning systems, limited maintenance of irrigation networks, and slow adoption of sustainable land management practices.

Compounding these challenges are gaps in social protection coverage and gender-responsive planning. Many smallholder households lack insurance or contingency safety nets to absorb the impacts of climate variability. Adaptive capacity is further limited by information asymmetries and low uptake of climate services, particularly in mountainous and rural areas where meteorological monitoring remains sparse. Patterns demonstrated in Table 1 above (Selected demographic indicators for the three target countries) reinforce these disparities, as high rural population shares and rapid demographic growth coincide with lower levels of human development and limited access to basic services. Similarly, consistent evidence from recent regional analyses indicates that institutional fragmentation and financing shortfalls constrain all countries' ability to transition from reactive crisis management to proactive adaptation planning.

These interrelated factors demonstrate that economic diversification alone does not guarantee climate resilience. Strengthening adaptive capacity in Central Asia requires reinforcing climate-sensitive public investment, expanding social protection, and improving regional cooperation on shared natural resources. In this context, regional coordination under the Adaptation Fund provides a platform for overcoming socioeconomic fragility by linking country-specific needs to cross-border solutions, ensuring that adaptation interventions address both structural and institutional barriers to resilience.

Gender and social inclusion

Gender disparities across Central Asia influence adaptive capacity, livelihood resilience, and equitable access to opportunities in climate-sensitive sectors. Despite near-parity in basic education and literacy, structural and institutional barriers continue to limit women's participation in decision-making, economic activity, and access to productive assets. These social inequalities amplify vulnerability to climate risks and must be integrated into adaptation planning to ensure that regional interventions benefit women and men equitably.

Recent progress in female education and literacy demonstrates substantial human capital potential. Literacy rates among adult women exceed 99 % in Kazakhstan and Uzbekistan, and remain near universal across the region. However, these achievements in education have not translated into equal participation in the labour market or political representation. The Global Gender Gap Index, as summarised in Table 3 below and overleaf, shows that Central Asian countries maintain relatively high scores in education and health but lag in political empowerment and economic participation. Central Asia ranks fourth globally in gender parity in 2025, yet women's representation in national parliaments remains below 30% across most countries, despite gradual improvement over the last decade^{28,29}.

²⁸World Economic Forum. (2025). *Global Gender Gap Report 2025*. [Online]. Available: <https://docclimate.short.gy/RvVORk>

²⁹ UN Women. (2025). *Gender Snapshot for Europe and Central Asia: Summary of key findings*. [Online]. Available: <https://docclimate.short.gy/LbGXuc>

Women's labour force participation remains concentrated in agriculture, where employment is typically informal and poorly remunerated. In Tajikistan nearly 60 % of employed women work in agriculture, compared to 10 % in Kazakhstan^{30,31}. Such patterns indicate that women bear a disproportionate share of climate risk due to dependence on water- and land-based livelihoods affected by droughts, heat stress, and soil degradation. Weak representation in producer cooperatives and rural decision-making structures further constrains their ability to access information, inputs, and financial support.

Political empowerment indicators illustrate a similar gap. Across the region, women continue to hold a minority of parliamentary and local council seats, limiting their influence on national and subnational resource allocation³². Health and survival outcomes are comparatively strong, with female life expectancy exceeding male life expectancy by 5 to 8 years in most countries. Nevertheless, maternal health remains a concern in low- and lower-middle-income settings such as Tajikistan, where access to reproductive services and medical infrastructure is uneven³³.

Table 3. Selected gender indicators for the three target countries

Parameter	Kazakhstan	Tajikistan	Uzbekistan
Global Gender Gap Index ³⁴ (index; global ranking, 2025)	0.698; 92nd	0.646; 129th	0.678; 110th
Rural population (% of total) ³⁵	37.6% of the population (51.2% women; 2024) ³⁶	73.8% of the population (49.4% women; 2020) ³⁷	49.1% of the population (49.4% women; 2022) ³⁸
Literacy rate of the female population aged 15 years and older (%)	99.8% (2020) ³⁹	No information available for this country.	100% (2022) ⁴⁰
Employment in agriculture, female (% of female employment)	10.7% (2023) ⁴¹	59.5% (2023) ⁴²	46.33% (2019) ⁴³

Structural barriers in property and credit markets further reduce women's adaptive capacity. Access to land ownership is restricted by customary and legal limitations, while credit and financial services remain less accessible to women in rural areas. This asymmetry in access to productive resources weakens women's capacity to invest in climate-resilient technologies or diversified livelihoods. In aggregate, these disparities translate into systemic constraints on social inclusion and economic resilience throughout the region.

Despite these challenges, the strong presence of educated women and the existence of gender-focused policy commitments in all three countries provide a platform for mainstreaming gender equality into regional adaptation strategies. Policy alignment with the Adaptation Fund Gender Policy and national commitments under SDG 5 can foster systemic inclusion in project implementation, particularly through expanded representation in water-user associations, producer organisations, and community-based adaptation initiatives.

The integration of gender and social inclusion perspectives across regional adaptation efforts is critical to addressing the root causes of vulnerability. As shown in Table 3 above, high female literacy coexists with persistently low economic participation, indicating underutilised potential in driving climate innovation and community resilience. Strengthening women's roles in local governance, resource management, and

³⁰ World Bank Group. (2025). *Kazakhstan Gender Data Landscape*. [Online]. Available: <https://doclimate.short.gv/r4Cvly>

³¹ World Bank Group. (2024). *Tajikistan - Employees, Agriculture, Female (% Of Female Employment)*. [Online]. Available: <https://doclimate.short.gv/blMU1O>

³² Inter-Parliamentary Union. (2025). *Global and regional averages of women in national parliaments*. [Online]. Available: <https://doclimate.short.gv/kzH9V1>

³³ World Health Organization. (2024). *Global Health Observatory: Maternal mortality ratio*. [Online]. Available: <https://www.who.int/data/gho>

³⁴ The Global Gender Gap Index (GGGI) annually benchmarks the current state and evolution of gender parity across four key dimensions (subindexes): economic participation and opportunity, educational attainment, health and survival, and political empowerment. The GGGI measures scores on a 0-1 scale, and scores can be interpreted as the distance covered towards parity (i.e. the %age of the gender gap that has been closed, numbers rounded).

³⁵ World Economic Forum. (2025). *Global Gender Gap Report 2025*. [Online]. Available: <https://doclimate.short.gv/qTpsqG>

³⁶ Bureau of National Statistics: Agency for Strategic planning and reforms of the Republic of Kazakhstan. (2024). *Population of the Republic of Kazakhstan by gender and type of locality*. [Online]. Available: <https://doclimate.short.gv/vnB2mjo/>

³⁷ Agency on Statistics under the President of the Republic of Tajikistan. (2020). *Women and men of the Republic of Tajikistan*. [Online]. Available: <https://doclimate.short.gv/wdpNbpP>

³⁸ The State Committee of the Republic of Uzbekistan on Statistics. (2022). *Demographic Situation in the Republic of Uzbekistan*. [Online]. Available: <https://doclimate.short.gv/Y2Vtj>

³⁹ World Bank Group. (2025). *Kazakhstan Gender Data Landscape*. [Online]. Available: <https://doclimate.short.gv/MEBU74>

⁴⁰ World Bank Group. (2025). *Uzbekistan Gender Data Landscape*. [Online]. Available: <https://doclimate.short.gv/RzcGPK>

⁴¹ World Bank Group. (2025). *Kazakhstan Gender Data Landscape*. [Online]. Available: <https://doclimate.short.gv/viebgg>

⁴² Agency on Statistics under the President of the Republic of Tajikistan. (2020). *Women and men of the Republic of Tajikistan*. [Online]. Available: <https://doclimate.short.gv/iKBuPw>

⁴³ World Bank Group. (2025). *Uzbekistan Gender Data Landscape*. [Online]. Available: <https://doclimate.short.gv/Gh1OifD>

entrepreneurship will enhance not only gender equity but also regional adaptive capacity. The socioeconomic and institutional trends illustrated in Tables 1–3 together demonstrate that regional adaptation planning must be inclusive by design, acknowledging gendered vulnerabilities as central to climate resilience.

Climate change baseline, projections, impacts, & vulnerabilities

Regional context: Central Asia

Central Asia's geographic configuration, dominated by landlocked steppe and desert ecosystems, makes it one of the most climate-sensitive regions in the world. The region spans approximately 5.9 million km² and encompasses climatic zones ranging from cold steppe and desert in the west to temperate and alpine conditions in the eastern highlands. Historical observations and climate projections indicate that Central Asia is undergoing rapid warming, aridification, and intensification of hydrometeorological extremes. These processes are directly undermining climate-sensitive sectors (particularly water, agriculture, and energy) which form the backbone of regional economies and rural livelihoods.

Asia, including Central Asia, is warming rapidly, with 2024 about 1.04 °C above the 1991–2020 average and the regional warming trend since 1991 almost double that of 1961–1990⁴⁴. Central Asia experienced pronounced temperature anomalies, severe heatwaves and significant drought, particularly in western Kazakhstan, alongside unusually harsh winter conditions and *dzud* in Mongolia⁴⁵. Precipitation became more erratic: record-breaking spring rainfall and rapid snowmelt drove the worst Central Asian floods in at least 70 years, heavily affecting Kazakhstan and south-western Russia, while other areas, including parts of the Syr Darya basin, were drier than normal⁴⁶. High-mountain Asia's glaciers, including those in the Tian Shan, continued accelerated mass loss in 2023–2024, with Urumqi Glacier No. 1 recording its most negative mass balance since 1959, signalling long-term risks to regional water supplies. Spring snow cover in the Tian Shan and Altai was below average. Sea-surface temperatures and ocean heat content in adjacent basins are rising faster than the global mean, and marine heatwaves are intensifying regional climate extremes, reinforcing the exposure of water, agriculture, and energy systems in Central Asia⁴⁷.

According to Köppen–Geiger^{48,49} projections the region will experience a shift of existing biomes toward hotter and drier classifications by 2070–2100 (Figure 2 overleaf). Cold desert and steppe ecosystems are projected to transition into hot steppe or desert regimes Uzbekistan, and southwestern Kazakhstan. Mountain ranges in Tajikistan are expected to lose large tracts of alpine and cold-summer temperate zones, with frost belts receding to higher elevations. These transformations will reduce water retention capacity, alter river flow seasonality, and accelerate land degradation.

⁴⁴ World Meteorological Organization. (2025). *State of the Climate in Asia 2024*. [Online]. Available: <https://docclimate.short.gy/2NshGU>

⁴⁵ *Ibid.*

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

⁴⁸ The Köppen–Geiger system classifies climate into five main classes and 30 sub-types. The classification is based on threshold values of monthly air temperature, and precipitation seasonality. This classification empirically maps biome distribution worldwide, i.e., regions in a similar class share common vegetation characteristics.

⁴⁹ Beck, H.E., N.E. Zimmermann, T.R. McVicar, N. Vergopolan, A. Berg, E.F. Wood. (2018). Present and future Köppen–Geiger climate classification maps at 1-km resolution. *Nature Scientific Data*: 5(1). [Online]. Available: <https://www.nature.com/articles/sdata2018214>.

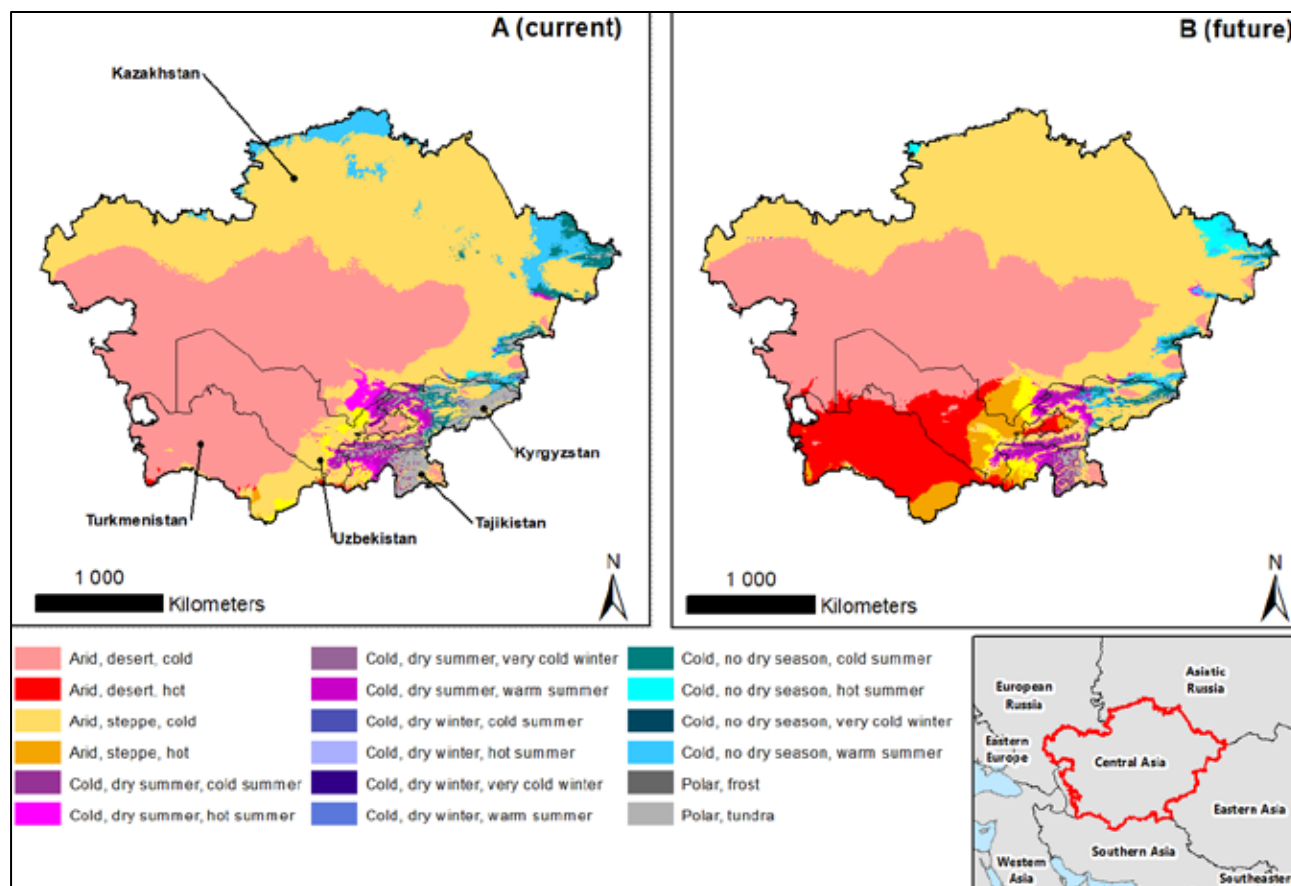


Figure 2. Present (A) and future (B) Köppen-Geiger classification for Central Asia⁵⁰

Central Asia is characterised by structural water scarcity driven predominantly by irrigated agriculture. According to global water resources datasets such as FAO AQUASTAT⁵¹ (Figure 3) and WRI Aqueduct^{52,53}, agriculture accounts for the vast majority of freshwater withdrawals across the region, and in several countries withdrawals already approach or exceed sustainable levels of renewable water resources. Uzbekistan in particular exhibits very high levels of water stress, with consumptive use for irrigation placing persistent pressure on river systems and associated groundwater. This systemic over-extraction, combined with rising temperatures and more variable precipitation, creates chronic pressure on water availability that extends beyond isolated dry years. It therefore underpins a regional pattern of water insecurity in which agriculture is both highly exposed to, and a major driver of, water stress.

⁵⁰ Source data: Beck, H.E., N.E. Zimmermann, T.R. McVicar, N. Vergopolan, A. Berg, E.F. Wood. (2018). Present and future Köppen-Geiger climate classification maps at 1-km resolution. *Nature Scientific Data* 5(1). [Online]. Available: <https://www.nature.com/articles/sdata2018214>.

⁵¹ Food and Agriculture Organization of the United Nations. (2025). *AQUASTAT Core Database*. [Online]. Available: <https://www.fao.org/aquastat/en/>.

⁵² Overall water risk measures all water-related risks, by aggregating all selected indicators from the Physical Quantity, Quality and Regulatory & Reputational Risk categories. Higher values indicate higher water risk.

⁵³ Source data: Hofste, R., S. Kuzma, S. Walker, E.H., Sutanudjaja, J.M., Sanchez, M.F., van Beek, R., Wada, Y., Rodriguez, S.G., and Reig, P. (2019). *Aqueduct 4.0: Updated Decision-relevant Global Water Risk Indicators*. World Resources Institute Technical Note. [Online]. Available: <https://doi.org/10.46830/wri.23.00061>

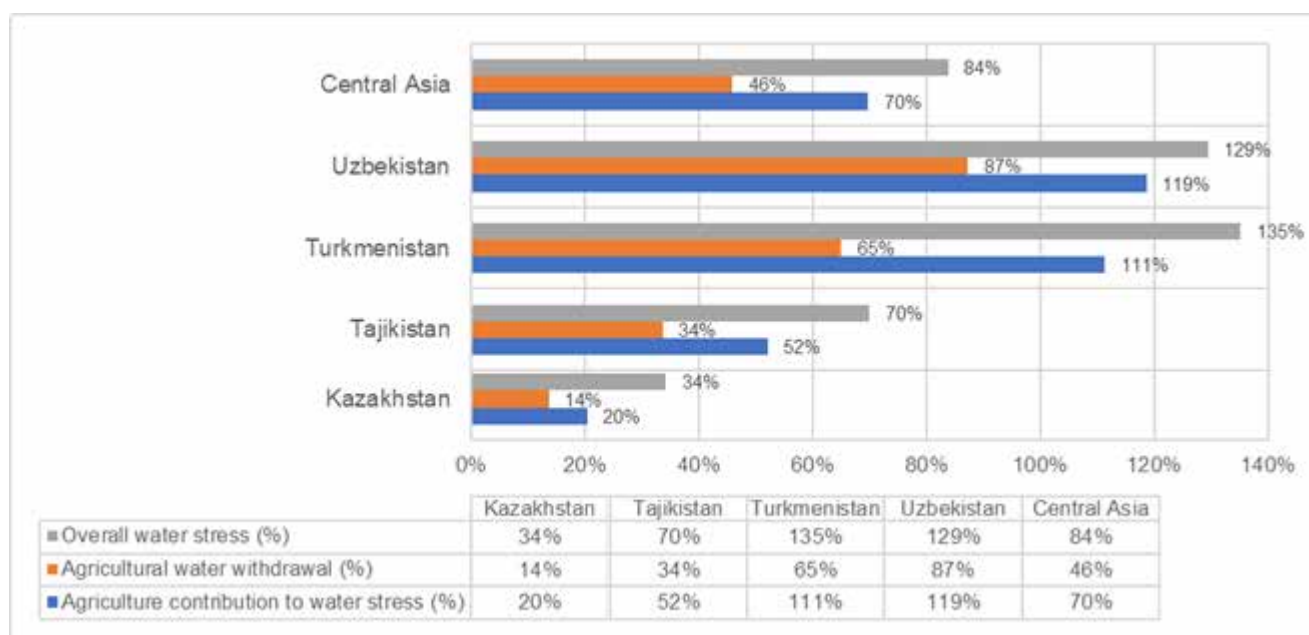


Figure 3. Regional and national water-related stress indicators (2020-2022 average)⁵⁴

Table 4. Comparative trends in national agricultural water withdrawal (2020-2022 average)⁵⁵

Parameter	Central Asia	Kazakhstan	Tajikistan	Uzbekistan
Overall water stress	Very high pressure on water resources (84%)	Lowest in the region; suggestive of a buffer (34%)	Below regional average but still high (70%)	Far above regional level; chronic over-allocation (129%)
Agricultural water withdrawal	Nearly half of renewable water is used for agriculture (46%)	Minimal relative pressure (14%)	Below regional benchmark; moderate intensity (34%)	Almost double the regional share; intensive irrigation (87%)
Agricultural sector contribution to water stress	Agriculture is the dominant regional driver of water stress (70%)	Agriculture is a minor contributor (20%)	Lower than region; non-agricultural factors more influential (52%)	Agriculture overwhelmingly drives scarcity (119%)

Within this context of structural scarcity, the frequency and spatial distribution of agricultural droughts have intensified over recent decades. Satellite-based agricultural stress indicators (ASIS) for 1984–2023 (Figure 4) show that large areas of cropland in Central Asia have experienced recurrent agricultural drought events, rather than occasional anomalies. The analysis identifies pronounced hotspots in downstream and lowland irrigated zones, including extensive stretches along the Garagum Canal and in parts of the Amu Darya and Syr Darya basins, where cropland has been affected by between 8 and 15 significant agricultural drought episodes over the 40-year period. By contrast, some upstream and higher-elevation areas of Tajikistan show fewer drought occurrences, reflecting their relatively greater water availability and snow- and glacier-fed hydrology. This spatial pattern points to a clear downstream concentration of repeated production losses and livelihood stress.

⁵⁴ Data source: Food and Agriculture Organization of the United Nations. (2025). AQUASTAT Core Database. [Online]. Available: <https://www.fao.org/aquastat/en/>

⁵⁵ *Ibid.*

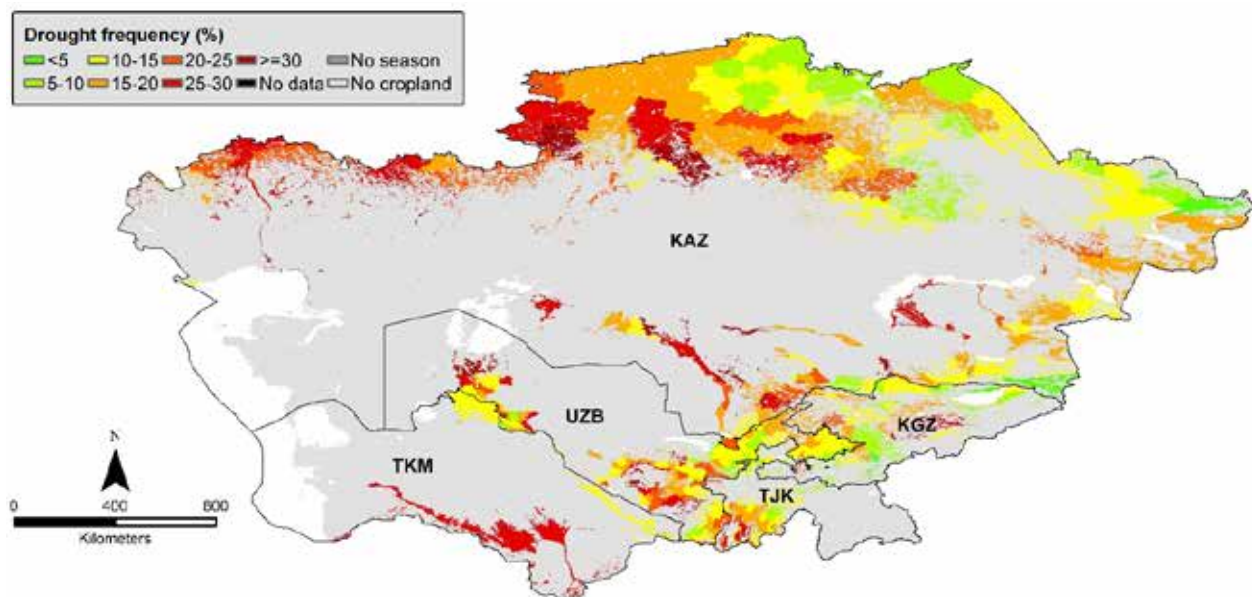


Figure 4. Frequency of severe drought in Central Asia between 1984-2023 in areas where 30% of the cropland is affected

The combined effects of rising temperature, diminishing snowpack, and erratic precipitation have increased the frequency of drought and flood events. Drought recurrence intervals that historically averaged once every 10 years now approach every five years in several subregions. Conversely, extreme rainfall events of short duration have intensified, triggering floods, landslides, and mudflows, particularly in the mountain and foothill zones of Tajikistan.

These climate stressors interact strongly with existing socioeconomic fragility described in preceding sections. High rural dependency, inequitable resource access, and underdeveloped social protection systems deepen vulnerability to shocks. Adaptive capacity remains limited by fragmented water governance and inconsistent climate data integration across countries. The result is an escalating regional adaptation challenge, with transboundary risk dimensions requiring coordinated mitigation and resilience-building strategies.

National contexts

The following section provides a concise overview of the national climate profiles for the three target countries, synthesising key observed and projected climate change trends, sectoral vulnerabilities, and socioeconomic impacts. Comprehensive technical profiles for each country have been developed but will be included at fully-developed proposal stage due to CN page limits.

Observed climate change trends

Across all three countries, long-term instrumental records confirm significant warming and increasing climatic variability, with discernible national patterns. In *Kazakhstan*, warming has averaged 0.28°C per decade since 1941, with faster increases in the northern and western oblasts. Annual temperatures between 1997 and 2010 were up to 1.4°C higher than the 1971–2000 mean, coinciding with more frequent heatwaves, longer dry spells, and declining summer precipitation. The Caspian coastline has experienced a sea-level fall exceeding two metres since 2006. *Tajikistan* has warmed by 1.0–1.2°C since the mid-20th century, with the strongest increases in the high Pamir and eastern ranges. Glacier cover has contracted by about 30%, and floods, landslides, and droughts have become more frequent. *Uzbekistan* shows similarly clear warming of 0.27°C per decade from 1950 to 2013, with more than 0.4°C per decade in its northern and urbanised zones. Increased heat extremes, longer dry periods, and intensifying aridity are evident across most parts of the country.

Projected climate change trends

Modelled projections for the mid- to late century illustrate sustained and, in some cases, accelerated warming across all three countries. Kazakhstan's mean annual temperature is expected to rise by

between 2.5°C and 3°C by 2040 under moderate emission pathways and could exceed 7°C by 2100 under high-end scenarios. Summer rainfall may decline by as much as 12%, while heat extremes and longer droughts become more common. Tajikistan will warm by approximately 2.2–2.9°C by 2040 and up to 3.5°C by century's end, accompanied by 60–75% glacier volume loss and more erratic precipitation, with wetter winters and drier summers. Uzbekistan could experience a 3.2°C rise under RCP4.5 and up to 5.6°C under RCP8.5 by 2100. The number of tropical nights is projected to more than double, while evaporative losses, extreme rainfall, and prolonged dry spells increase dramatically.

Sectoral vulnerabilities

Water resource dependence and management inefficiencies represent the central vulnerability across all three countries, compounded by sectoral fragility in agriculture, energy, and ecosystems. In Kazakhstan, 45% of renewable water originates outside national borders, exposing downstream systems to upstream management decisions and glacier loss. Irrigation efficiency remains under 50%, and more than 70% of land area is affected by desertification and salinisation, reducing crop and pasture productivity. In Tajikistan, similar dependencies exist, with water and energy systems linked to rapidly vanishing glaciers. Irrigation efficiency is below 40%, and arable lands are degraded by erosion and salinity. Hydropower output and agricultural yields for cereals and cotton are increasingly variable. Uzbekistan is also downstream-dependent, with 80% of renewable freshwater generated outside its territory. Projected declines in Amu Darya and Syr Darya inflows by up to one-third threaten irrigated agriculture that accounts for a large share of GDP and employment.

Socioeconomic and cross-sectoral impacts

The social and economic systems of all three countries are deeply intertwined with climate-sensitive sectors. In Kazakhstan, recurrent droughts, floods, and land degradation reduce yields and livestock productivity, with flood losses affecting over 40,000 people annually. Energy and health are affected by temperature extremes and air pollution from coal dependence. In Tajikistan, high poverty rates and isolation of mountain communities amplify exposure to floods and droughts that already reduce GDP by up to two percent annually. Energy and food insecurity are persistent, and health risks from heat and vector-borne diseases are rising. Uzbekistan experiences systemic stress across the water–energy–agriculture nexus. Shrinking water resources induce economic losses, health burdens from increased dust and salinity, and exacerbate rural poverty through crop and livestock impacts.

Vulnerability synthesis

The target countries within the Central Asian region exhibit a shared pattern of high exposure, low adaptive capacity, and systemic interdependencies. Kazakhstan faces compound risks connecting water scarcity, desertification, and energy fragility, requiring modern hydrological management and sustainable land use reform. Tajikistan is critically dependent on glacier-fed systems where reduced summer inflows endanger food and energy security, calling for basin-level management, resilient infrastructure, and social safety mechanisms. Uzbekistan epitomises the regional interlinkages: cross-sectoral fragility is deepened by transboundary water stress, ecosystem degradation, and socio-economic pressures, underscoring the necessity of coordinated adaptation and regional cooperation. Table 5 overleaf compares trends in observed and projected climate for the three countries, as well as a comparative vulnerability profile.

Table 5. Climatology and vulnerability summary for the three target countries

Parameter	Kazakhstan	Tajikistan	Uzbekistan
Observed climate	Average warming of 0.28°C per decade since 1941; more frequent heatwaves, longer dry spells, and floods linked to snowmelt; Caspian Sea level down >2 m since 2006.	1–1.2°C warmer since 1960s; 30% glacier loss; more flash floods and droughts disrupting crops and infrastructure.	Warming of 0.27°C per decade; longer heatwaves, higher aridity, less spring–summer rain, more dry days.

Parameter	Kazakhstan	Tajikistan	Uzbekistan
Projected climate	+2.5–3°C by 2040 (mid-range) and +7°C by 2100 (high); drier summers and more extreme rainfall; accelerated glacier retreat.	+2.2–3.5°C by 2040–2100; glacier volume loss of 60–75%; more intense winters and drier summers with frequent extremes.	+3.2–5.6°C by 2100; rapid warming, increased evaporative losses, intense rainfall episodes, and widespread soil drying.
Vulnerability profile	Reliant on transboundary inflows (45% of supply); inefficient irrigation (<50%); expanding desertification and declining pasture productivity.	Dependence on glacier-fed hydropower (95% of supply) and irrigation; degraded soils; fragile slope settlements	Downstream reliance (80% external inflows); reduced Amu/Syr Darya flows; widespread salinity, desertification, and Aral dust hazards.

National Meteorological and Hydrological Services – status quo

This section synthesises the current institutional capacities, operational constraints, and modernisation priorities of the National Meteorological and Hydrological Services (NMHSs) in the three participating countries, providing the foundation for the project rationale and investment logic for Part II. Table 5 compares recent information for each NMHS, while the following sub-sections summarise key priorities and challenges by target country.

Kazakhstan

Kazhydromet operates as the most technically advanced service in the region, maintaining a wide network that meets GBON surface requirements and supporting multi-hazard warning functions in coordination with emergency services. Nevertheless, limitations in upper-air observations, radar coverage, and real-time hydrological data reduce forecast precision and lead times. Institutional priorities include expanding upper-air and radar networks, modernising data systems, integrating meteorological, hydrological, and air quality databases, and improving staff research capacity to strengthen impact-based and user-oriented services for key sectors such as agriculture, water, health, and urban risk management. In Kazakhstan, soil moisture monitoring remains limited in spatial coverage and technical robustness, while hydrometric and cryosphere observation networks also exhibit significant gaps. Sub-seasonal and seasonal outlooks for temperature, and for precipitation in particular, are characterised by low skill, which constrains their operational value. As a result, the reliability of seasonal hydrological forecasts of water availability is reduced, limiting the effectiveness of anticipatory planning in water-dependent sectors.

Tajikistan

Tajikhydromet maintains a mixed network of manual and automatic stations but lacks both radar and upper-air observation capability. Data transmission and processing are still manual and staff shortages constrain GIS and modelling functions. Forecasting is largely deterministic and based on expert judgment, while hydrological operations remain fragmented and CARFFG is underutilised due to data quality issues. Priority actions include automating observation and data management systems, digitising and quality-controlling historical records, expanding upper-air and radar access through regional cooperation, strengthening hydrological and cryosphere monitoring systems, and institutionalising collaboration with emergency services for improved warning dissemination. In Tajikistan, the soil moisture observation network is sparse and fragmented, and important gaps persist in hydrometric and glacier–snow monitoring systems. These observational limitations are compounded by the poor performance of sub-seasonal and seasonal forecasts for temperature and particularly precipitation. As a consequence, projections of seasonal river flows and water storage are highly uncertain, constraining the capacity of authorities and users to plan for droughts and variable inflows.

Uzbekistan

Uzhydromet has undergone significant modernisation supported by international cooperation, operating dense observation networks complemented by satellite-based snow and environmental monitoring systems. Progress in digitalisation and automation has been substantial, but hydrological and meteorological databases remain only partially integrated, limiting full system efficiency. Institutional

priorities include completing database integration, strengthening data governance, advancing nowcasting and early warning systems, building IT and modelling skills, and formalising inter-agency coordination to deliver multi-hazard and climate services that support national adaptation priorities. In Uzbekistan, the status of soil moisture monitoring is similarly inadequate, with limited measurement density and consistency, and there are substantive gaps in hydrometric and cryosphere observation networks. Sub-seasonal and seasonal climate forecasts, notably for precipitation, show insufficient accuracy, which erodes user trust and applicability. This, in turn, leads to large uncertainties in seasonal hydrological forecasts of water resources, reducing their effectiveness for supporting irrigation scheduling, reservoir operations, and broader water management decisions.

Table 6. Overview of national hydrometeorological services in the three target countries

Country and its NMHS	Current status
Kazakhstan: Kazhydromet ⁵⁶	Kazhydromet, under the Ministry of Ecology, Geology and Natural Resources, employs around 3 000 staff across 15 regional branches and has been fully state-funded since 2021. It operates a comprehensive meteorological, hydrological, agrometeorological, and air-quality network that largely meets GBON surface requirements, though upper-air coverage remains limited. In the short-to-medium range, forecasting relies on a regional NWP model supported by ECMWF, GFS, DWD, WRf, and COSMO-Ru outputs. The service issues meteorological, hydrological, and air-quality warnings in coordination with the Ministry of Emergency Situations. Hydrological operations use HBV and SWIM models but have limited real-time data. Key priorities include strengthening research capacity, modernising data systems, expanding upper-air and radar observations, and improving user-oriented and impact-based services.
Tajikistan: Tajikhydromet ⁵⁷	Tajikhydromet, under the Committee for Environmental Protection, manages meteorological, hydrological, and environmental monitoring through 52 manual and 56 automatic weather stations and 96 hydrological posts (33 operational). Observation and data flows are mostly manual, with large archives awaiting digitisation. Forecasts depend heavily on expert judgment, supported by ECMWF, GFS, and COSMO-Ru outputs, as well as MODSNOW and DWAT for snow and runoff, while CARFFG use is constrained by unreliable inputs. There is no radar or upper-air network, though a shared regional radar field is planned. Staffing shortages limit GIS and modelling capabilities, and warnings remain in manual text format. Priority actions include network modernisation, digitising archives, improving automation and data quality, and enhancing cooperation with emergency-management institutions.
Uzbekistan: Uzhydromet ⁵⁸	Uzhydromet, under the Ministry of Ecology, Environmental Protection and Climate Change, is responsible for national meteorological, hydrological, and climate services. Its extensive network includes 79 meteorological stations, 130 hydrological posts, and 61 agrometeorological stations, complemented by snow and visual observation sites. Since 2010, MODIS, NOAA, Meteosat, and Fengyun satellite data have supported snow and environmental monitoring. Internationally backed modernisation has improved digitalisation and automation, though hydrological and meteorological databases remain partially unintegrated. The agency continues to strengthen staff skills and IT systems, expand inter-agency coordination, and develop more comprehensive early-warning and forecasting capacities.

Problem statement & regional barrier analysis

Although socioeconomic progress has been made in recent decades, Central Asian countries continue to face deep-seated environmental and socioeconomic constraints that impede sustainable development.

⁵⁶ Zentralanstalt für Meteorologie und Geodynamik and World Bank. (2022). *Assessment of Kazakhstan's Capacity to Monitor, Forecast, Project and Warn on Climate-related Hazards*. [Online]. Available: <https://www.ofdr.org/en/publication/assessment-kazakhstan-capacity-monitor-forecast-project-and-warn-climate-related>

⁵⁷ World Meteorological Organization and World Bank. (2025). *National Capacity Assessment Report: Tajikistan*. Unpublished technical report.

⁵⁸ GWP. (2022). Uzbekistan Country Survey Report Draft: Concept for Revision the National Action Program to Combat Drought and Land Degradation in Republic of Uzbekistan. Available: <https://www.droughtmanagement.info/portal/wp-content/uploads/2022/11/Uzbekistan-Observation-Report-on-Drought.pdf>

Their economies remain heavily reliant on commodity exports and remittances from migrant labour, exposing them to external price volatility and limiting financial resilience. Structural issues such as weak institutional capacity, fragmented regional connectivity, social inequality, macroeconomic instability, and inadequate alignment of trade and investment policies further exacerbate these vulnerabilities⁵⁹. Three interconnected structural challenges shape the region's development trajectory: geographic isolation due to lack of sea access, heavy dependence on natural resources and an underdeveloped financial sector, poor coordination in managing shared water and energy systems, and the escalating impacts of climate change⁶⁰ (Figure 2 overleaf).

Addressing these requires integrated responses that combine environmental adaptation with economic modernisation. Regional cooperation in water and energy management is vital to sustain economic growth and meet rising energy demand, given the transboundary nature of river basins. Joint investments in renewable energy, infrastructure modernisation, and irrigation efficiency can strengthen resource security while reducing carbon intensity. Similarly, advancing low-carbon technologies, digitalising trade processes, and improving transport corridors will stimulate diversification, enhance resilience to climate risks, and foster inclusive regional integration. Strengthening financial systems and business climates would also attract investment, expand access to green finance, and enable countries to shift from extractive dependence to sustainable, innovation-driven growth⁶¹.

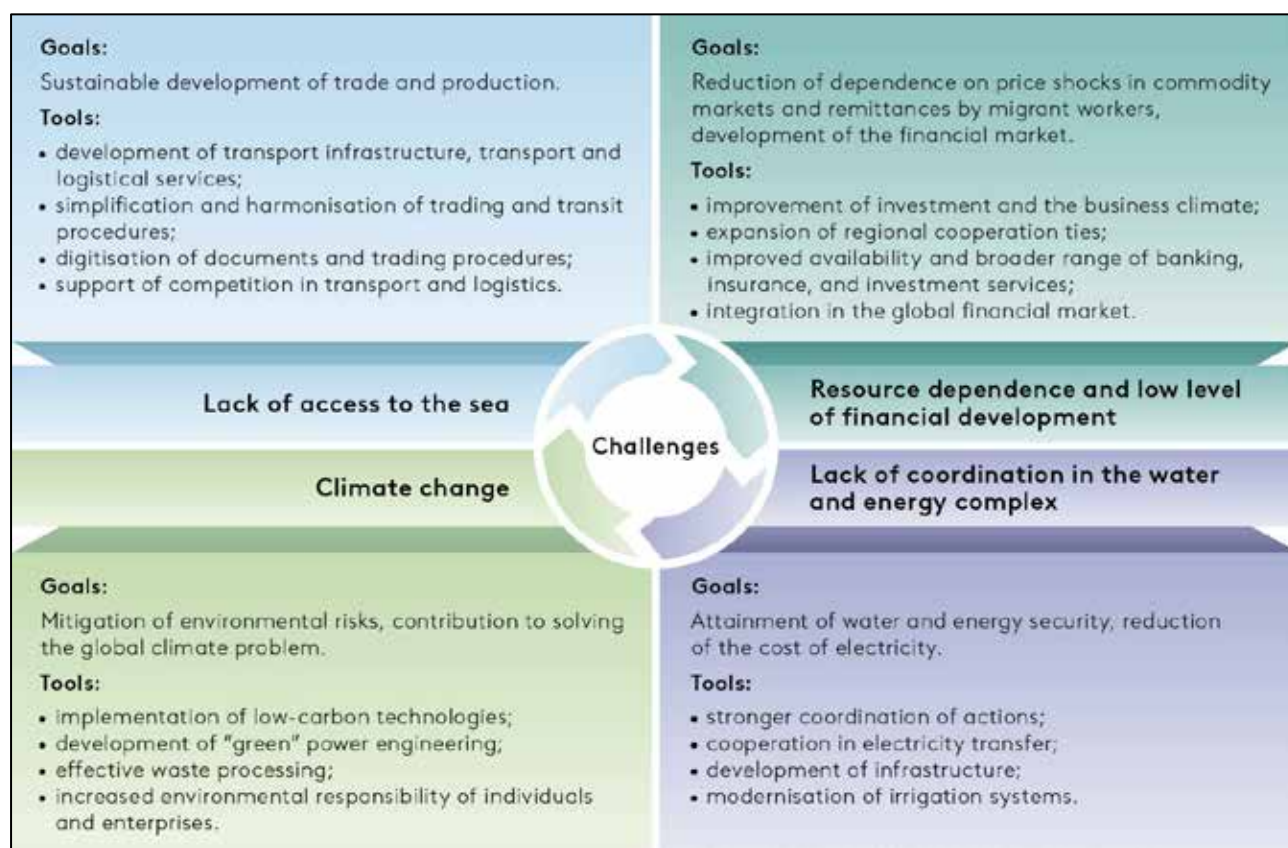


Figure 5. Conceptual summary of three key challenges facing the Central Asian region⁶²

Regarding water resource management and drought-related factors, Central Asia faces increasing water stress as climate change intensifies drought frequency, severity, and duration across its three landlocked countries. The region's semi-arid to arid climate and reliance on snow and glacier melt from the Amu Darya and Syr Darya river basins make it acutely vulnerable to rising temperatures, reduced snow accumulation, and accelerated glacier retreat. These changes are altering the timing and volume of river

⁵⁹ Eurasian Development Bank. (2022). *The Economy of Central Asia: A Fresh Perspective*. [Online]. Available: <https://doclimate.short.gy/weE6dr>

⁶⁰ *Ibid.*

⁶¹ Eurasian Development Bank. (2022). *The Economy of Central Asia: A Fresh Perspective*. [Online]. Available: <https://doclimate.short.gy/weE6dr>

⁶² Excerpted from: Eurasian Development Bank. (2022). *The Economy of Central Asia: A Fresh Perspective*. [Online]. Available: <https://doclimate.short.gy/weE6dr>

flows, heightening uncertainty around water availability and threatening critical water-dependent sectors such as agriculture, energy, and industry. Recent and ongoing upstream water infrastructure developments outside the project countries may, within the coming years, substantially alter flow regimes and water availability in parts of the basin. While the precise scale, timing, and operating rules of these investments remain uncertain, they could materially reduce downstream surface water inflows, modify seasonal flow patterns, and increase interannual variability in already water-stressed sub-basins. This adds an additional layer of uncertainty for drought risk management, irrigation planning, and environmental flow maintenance in the project area. Prolonged droughts are reducing pasture productivity, degrading rangelands, and driving water-related conflicts, especially among rural and pastoral communities, thereby undermining food security, livelihoods, and regional stability.

National drought-related policies and strategies have been introduced across Central Asia and are reflected in the countries' NDCs and National Adaptation Plans (NAPs). However, implementation remains limited due to weak institutional capacity, insufficient financing, fragmented data management systems, and inadequate integration of climate risk into planning processes. The absence of effective transboundary coordination and harmonised early warning mechanisms further constrains collective action on shared water resources. While regional frameworks such as the 2024 Regional Climate Change Adaptation Strategy and the 2021 UNCCD Regional Drought Strategy set a strong foundation, they require operationalisation through a coordinated, actionable programme. Strengthening monitoring systems, institutional capacities, and cross-border cooperation is therefore essential to reduce drought vulnerability, safeguard water security, and enhance climate resilience in Central Asia. Building resilience in the region will require strengthening regional cooperation in water and energy management, diversifying rural economies, and investing in climate adaptation to safeguard livelihoods and sustain long-term growth^{63,64}.

Project beneficiaries⁶⁵

The project is expected to directly benefit approximately 14 million drought-affected people across Kazakhstan, Tajikistan, and Uzbekistan, of whom about 50.6 per cent are women, based on 2025 population estimates⁶⁶. Drought-affected populations are defined as people residing in areas where meteorological and hydrological indicators (for example, Standardized Precipitation Index below an agreed threshold over at least one month) have resulted in adverse impacts on water availability, agricultural production, food security or health. Within this regional total, the indicative estimates are approximately 1.67 million people in Kazakhstan, 1.62 million in Tajikistan and 6.95 million⁶⁷ in Uzbekistan.

The main intended beneficiaries are vulnerable rural and peri-urban households whose livelihoods and food security are directly affected by drought, including smallholder farmers, pastoralists, agricultural labourers, water-dependent informal workers and women-headed households with limited access to assets, information and finance⁶⁸. Direct institutional and stakeholder beneficiaries include but are not necessarily limited to National Meteorological and Hydrological Services (NMHSs); national ministries responsible for climate change, water provision and resources management, agriculture, forestry, industry and environment; agencies monitoring environmental and water quantity and quality; local administrations; universities and research institutions; and private actors whose activities are sensitive to drought, such as agricultural enterprises, pastoralism-related businesses, tourism and small-scale industry. Particular attention will be given to low-income and socially marginalised people in these groups whose income depends on climate-sensitive sectors⁶⁹.

⁶³ World Bank. (2023). *Sluggish Growth, Rising Risks. Europe and Central Asia Economic Update (Fall 2023)*. [Online]. Available: <https://openknowledge.worldbank.org/entities/publication/8ae7bcc5-2cac-48bd-b263-e211418e2972>

⁶⁴ Asian Development Bank. (2023). *Asian Development Outlook September 2023: Caucasus and Central Asia*. [Online]. Available: <https://www.adb.org/sites/default/files/publication/908126/central-asia-ado-september-2023.pdf>

⁶⁵ The estimation of expected beneficiaries at concept stage is preliminary and focuses on methodology and assumptions. It is intended to support reviewer guidance on the approach and rationale before further refinement and quantification at the fully-developed proposal stage. The current figures for direct beneficiaries will therefore be expanded, more fully quantified and methodologically strengthened between the CN and FDP phases using Project Formulation Grant resources, if approved.

⁶⁶ These figures and underlying thresholds will be validated and refined through country-led climate hazard and impact analysis during the PFG and FDP phases.

⁶⁷ The lack of comparable data in Uzbekistan was countered by applying the average drought-affected share of the other three countries to its national population.

⁶⁸ A structured vulnerability assessment will be carried out during project preparation to identify and characterise specific vulnerable communities, households and individuals, including youth, older persons, persons with disabilities, minority groups and, where relevant, indigenous peoples, and to generate baseline data against which benefits can be quantified.

⁶⁹ Quantified estimates of institutional and stakeholder beneficiaries, including staff, operational units, communities served and private sector entities reached, will be developed during the PFG and FDP phases and linked to the project results framework.

Indirect beneficiaries⁷⁰ will comprise broader populations whose exposure and sensitivity to drought impacts are reduced through strengthened regional and national monitoring, early warning and response systems, improved water resources management and climate-informed sectoral planning.

The current estimates are sex-disaggregated at population level and the project will seek to ensure equitable access to benefits for women and men⁷¹ in drought-affected areas, including women farmers, pastoralists and producers.

Project Objectives:

The project aims to operationalise the Central Asia Regional Drought Strategy through a coordinated regional approach that harmonises monitoring and early warning systems, strengthens institutional and policy frameworks, and integrates drought risk management into national and regional planning. By implementing the three pillars of integrated drought management (monitoring and early warning, risk and impact assessment, and risk mitigation, preparedness, and response) the project will enable effective, gender-responsive drought risk reduction and adaptation measures for vulnerable communities and critical sectors. Sustained monitoring of glaciers and snow, the “Water Towers of Central Asia,” will be central to improving drought prediction and water resource planning. The initiative aligns with global priorities such as the Early Warnings for All initiative (EW4All) and the UN International Year of Glaciers’ Preservation (2025) and builds upon the achievements of the World Bank’s Central Asia Hydrometeorology Modernization Project (CAHMP) and complementary regional efforts. Through cross-border collaboration, knowledge management, and learning, the

project will ensure the sustainability and scalability of drought resilience across Central Asia.

Project Components and Financing

Table 7 below and overleaf summarises the proposed project’s components, outputs, outcomes, and corresponding budget allocation

Table 7. Overview of project components, expected outcomes, outputs, geography, and budget⁷²

Project component	Expected outcome	Expected outputs	Countries	Amount (USD)
Component 1: Harmonised drought monitoring, forecasting, early warning and risk assessment	Outcome 1.1: Climate-responsive drought risk and impact assessment institutionalised across the participating countries.	Output 1.1.1: Regional baseline drought risk assessment, national profiles and hotspot maps completed and validated.	Kazakhstan; Tajikistan; Uzbekistan	900,000
		Output 1.1.2: Harmonised climate-responsive drought risk assessment and mapping methodology developed, piloted and adopted.	Kazakhstan; Tajikistan; Uzbekistan	900,000
		Output 1.1.3: Interoperable regional and national sectoral drought-impact databases established and operational.	Kazakhstan; Tajikistan; Uzbekistan	1,200,000
	Outcome 1.2: National and regional drought monitoring, forecasting and early-warning services strengthened and used for anticipatory decision-making.	Output 1.2.1: Integrated hydrometeorological and cryosphere observation networks and data-sharing systems upgraded and operational.	Kazakhstan; Tajikistan; Uzbekistan	2,600,000
		Output 1.2.2: Impact-based drought forecasting products, bulletins and sector advisories developed, tested and routinely disseminated.	Kazakhstan; Tajikistan; Uzbekistan	1,900,000
Subtotal - Component 1				7,500,000
Component 2: Community drought	Outcome 2.1: Vulnerable communities apply inclusive, climate-informed measures that	Output 2.1.1: Inclusive community drought-risk management and contingency plans developed, endorsed, financed and tested.	Kazakhstan; Tajikistan; Uzbekistan	1,500,000

⁷⁰ Indirect beneficiary numbers will be estimated between the CN and FDP stages based on a refined theory of change, stakeholder mapping and value chain analysis, and will be disaggregated by sex and, where feasible, other relevant vulnerability characteristics.

⁷¹ A dedicated gender analysis will be undertaken during the PFG and FDP phases to identify gender-differentiated needs and barriers to accessing project benefits and to define gender-responsive outputs, indicators and targets, in line with the Adaptation Fund Gender Policy.

⁷² Cross-cutting requirement: Gender equality and social inclusion will be integrated across all outputs through gender-responsive activities, indicators, targets, responsibilities and budgets. These measures will be consolidated in the Gender Action Plan prepared during the PFG/full proposal stage; the GAP is therefore not presented as a standalone project output.

resilience and risk financing	reduce drought exposure and sensitivity.	Output 2.1.2: Forecast-based drought-risk financing instruments designed, piloted and made accessible to eligible women and men.	Kazakhstan; Tajikistan; Uzbekistan	1,700,000
		Output 2.1.3: Community-led nature-based solutions for land and water resilience implemented and supported by maintenance and monitoring arrangements.	Kazakhstan; Tajikistan; Uzbekistan	2,800,000
Subtotal - Component 2				6,000,000
Component 3: Drought governance, institutional capacity and knowledge systems	Outcome 3.1: National institutions coordinate and deliver end-to-end drought-risk management effectively.	Output 3.1.1: Modular end-to-end drought-management capacity-development programme established and delivered to national and regional institutions.	Kazakhstan; Tajikistan; Uzbekistan	1,150,000
		Output 3.1.2: National intersectoral drought coordination groups established, strengthened and operationalised.	Kazakhstan; Tajikistan; Uzbekistan	800,000
	Outcome 3.2: Regional institutions provide coordinated and sustainable drought-related climate services.	Output 3.2.1: Roadmap, governance, technical functions and sustainable-financing arrangements for a WMO Regional Climate Centre with drought-support functions developed and operationalised.	Kazakhstan; Tajikistan; Uzbekistan	980,000
	Outcome 3.3: National policy and regulatory frameworks enable proactive drought-risk management.	Output 3.3.1: Drought-related policy, legal and standard operating procedure reforms developed, validated and submitted to competent authorities.	Kazakhstan; Tajikistan; Uzbekistan	1,300,000
	Outcome 3.4: Drought knowledge, learning and stakeholder uptake strengthened.	Output 3.4.1: Multilingual communications and stakeholder-engagement system established and implemented.	Kazakhstan; Tajikistan; Uzbekistan	900,000
		Output 3.4.2: Regional and national knowledge-management systems and communities of practice for drought-risk management established and operational.	Kazakhstan; Tajikistan; Uzbekistan	1,370,000
Subtotal - Component 3				6,500,000
Total Components 1-3				20,000,000
Project Execution Cost				2,000,000
Total Project Cost				22,000,000
Implementing Entity Management Fee				2,200,000
Amount of Financing Requested				24,200,000

Projected Calendar

Key project milestones are defined below in Table 6.

Table 8. Projected project calendar

Milestones	Expected Dates
Start of Project Implementation	June 2027
Mid-term Review (if planned)	November 2029
Project Closing	June 2032
Terminal Evaluation	March 2033

PART II: PROJECT JUSTIFICATION

A. Describe the project components, particularly focusing on the concrete adaptation activities, how these activities would contribute to climate resilience, and how they would build added value through the regional approach, compared to implementing similar activities in each country individually.

The Integrated Drought Management for Central Asia (IDCA) project will strengthen climate resilience across Kazakhstan, Tajikistan, and Uzbekistan by reducing drought vulnerability through a shift from reactive crisis management to proactive, risk-informed action. The project establishes an integrated regional framework that links all four components of an early warning system (EWS, namely disaster risk assessment, monitoring and forecasting of hazards, warning dissemination and communication, and preparedness and response capacity) with policy, institutional, and community-level measures. Its strategy is structured around three interdependent components that together form a complete adaptation value chain: i) harmonising regional and national systems for drought monitoring, forecasting, early warning, and risk assessment; ii) demonstrating community-level resilience and risk financing solutions to translate knowledge into practice; and iii) strengthening institutional and policy frameworks, regional collaboration, knowledge management, and gender-responsive action to embed and sustain these achievements. Through joint approaches and the adoption of common methodologies, the project will foster cross-border cooperation, improve the management of shared water and climate risks, and establish a durable foundation for drought resilience across Central Asia.

COMPONENT 1: HARMONISED DROUGHT MONITORING, FORECASTING, EARLY WARNING AND RISK ASSESSMENT

This component, encompassing IDM pillars 1 and 2, establishes harmonised, climate-informed systems for drought monitoring, forecasting, early warning, and integrated risk and impact assessment across the three participating countries. It institutionalises dynamic risk and impact assessment, integrates a sectoral drought impact database with national and regional monitors, strengthens hydro-meteorological and cryosphere observation and prediction capabilities adopting WMO standards, and enhances user-oriented dissemination through regular drought bulletins and sectoral advisories linked to national coordination groups and regional fora.

Outcome 1.1. Climate-responsive drought risk and impact assessment institutionalised across the participating countries

This outcome institutionalises dynamic, comparable risk and impact assessment processes across countries. It begins with a comprehensive regional baseline, followed by a standardised climate-responsive methodology adopted across institutions, and an integrated sectoral impact database that informs policy development, anticipatory action, and investment prioritisation.

Output 1.1.1: Regional baseline drought risk assessment, national profiles and hotspot maps completed and validated

A comprehensive baseline drought risk assessment will be undertaken across the three Central Asian countries to establish a reference point for evaluating progress. The assessment will synthesise data on historical drought events, climate patterns, and sectoral vulnerabilities, focusing on agriculture, water, and energy. It will map drought hotspots and review institutional capacity for drought management, generating national profiles and a regional synthesis to guide subsequent actions.

Indicative activities:

- Conduct a synthesis of existing data on historical drought events, climatic trends, and sectoral vulnerabilities.
- Facilitate multi-stakeholder national consultations to validate findings and incorporate experiential insights.
- Develop and publish a regional baseline report, including national profiles and drought hotspot

maps prioritising most vulnerable groups.

Output 1.1.2: Harmonised climate-responsive drought risk assessment and mapping methodology developed, piloted and adopted

A forward-looking, standardised methodology will be developed to integrate climate change projections and socio-economic scenarios into drought risk assessments. The approach will be piloted in a transboundary basin to ensure applicability, comparability, and scalability before regional roll-out, enabling institutions to produce consistent climate-responsive risk maps.

Indicative activities:

- Convene a regional technical group to define indicators and analytical standards.
- Develop a methodological guidebook including downscaled projections and socio-economic factors.
- Pilot the methodology in a transboundary basin and train national teams for replication.

Output 1.1.3: Interoperable regional and national sectoral drought-impact databases established and operational

A regional, interoperable database will be established to capture historical and ongoing drought impacts across key sectors, integrated with national and regional monitoring systems. The database will support cost-benefit analyses, calibration of impact-based indices, and evidence-based policy and financial protection design. The database design will adhere to Integrated Drought Management Programme (IDMP) guidelines, facilitating regional data exchange and interoperability. Scientific organisations will establish connections at a regional level to foster collaborative data utilisation and knowledge sharing.

Indicative activities:

- Develop standardised reporting protocols and data templates.
- Establish citizen-science networks for drought impacts through mobile applications and incentive mechanisms.
- Establish a web-based, interoperable database connected to country-level platforms.
- Recover and digitise historical drought impact data and train focal points for ongoing management.

Outcome 1.2. National and regional drought monitoring, forecasting and early-warning services strengthened and used for anticipatory decision-making

This outcome closes critical monitoring gaps and enhances forecasting capacity through targeted monitoring upgrades, citizen science data collection, and adoption of the WMO Hydrological Observing System (WHOS), the WMO Information System 2.0 (WIS 2.0) as well as the, WMO Global Hydrological Status and Outlook System (HydroSOS) approach. The upgraded systems support observational data and metadata sharing as well as co-produced, user-oriented products such as monthly and seasonal drought bulletins and sectoral advisories, strengthening the link between early warning and decision-making.

Output 1.2.1: Integrated hydrometeorological and cryosphere observation networks and data-sharing systems upgraded and operational

National systems will be upgraded to strengthen real-time and delayed-mode data generation, collection and exchange, with an emphasis on high-elevation cryosphere⁷³ observations critical to regional water availability. Community participation will be enabled through citizen science networks, and regional interoperability will be achieved by adopting WMO standards⁷⁴ and best practices and adapting FAO's ASIS to regional needs within a shared platform.

Indicative activities:

- Conduct technical gap assessments of national monitoring networks to address cryosphere-

⁷³ Including snow depth, snow water equivalent (SWE), snow cover extent, snow albedo, and glacier mass balance.

⁷⁴ To ensure standardized observation and interoperable data, this will include the GCW CryoNet site requirements ([WIGOS Manual](#)), and Best Practices of Cryosphere Observations ([Vol II, WMO-No. 8](#))

- relevant limitations
- Strengthen monitoring networks for drought monitoring including the rehabilitation of existing groundwater and hydrometeorological stations and the operationalisation and densification of high-elevation observing stations., with a view to ensuring long-term sustainability.
- Establish citizen-science networks for snow depth, groundwater, and discharge through mobile applications and incentive mechanisms. Basic quality control should be applied to ensure the credibility of citizen-science observations.
- Implement WIS 2.0 including WHOS technologies and as a support to GCW Data Portal to operationalise data and metadata-sharing including strengthening IT infrastructure and open-source software applications supporting metadata and data collection and sharing. Data and metadata for hydrological datasets will be harmonized, and management-maintenance protocols will be developed.
- Tailor FAO's Agriculture Stress Index System (ASIS) for regional drought monitoring and integrate it into drought monitoring

Output 1.2.2: Impact-based drought forecasting products, bulletins and sector advisories developed, tested and routinely disseminated

National forecasting capabilities will be strengthened to improve anticipatory drought risk management and water resource planning, with particular focus on sub-seasonal to seasonal timescales relevant to agricultural decision-making and water allocation. Regional interoperability will be achieved by adopting WMO standards and best practices.

Indicative activities:

- Strengthen impact-based forecasting capabilities for drought with focus on sub-seasonal to seasonal forecasting, including capacity building, model implementation, and verification systems.

COMPONENT 2: COMMUNITY DROUGHT RESILIENCE AND RISK FINANCING

This component, encompassing IDM Pillar 3, translates improved information and institutional capacity into on-the-ground resilience, combining participatory planning and contingency arrangements, innovative financial protection mechanisms, and nature-based solutions that restore land and water functions. Interventions will be designed for replication and alignment with land degradation neutrality and national development priorities.

Outcome 2.1. Vulnerable communities apply inclusive, climate-informed measures that reduce drought exposure and sensitivity

This outcome strengthens adaptive capacity in priority communities by co-developing integrated drought risk management and contingency plans, piloting forecast-based risk financing instruments, and implementing nature-based solutions that reduce exposure and sensitivity while supporting resilient livelihoods.

Output 2.1.1: Inclusive community drought-risk management and contingency plans developed, endorsed, financed and tested

Participatory processes in selected communities will generate integrated plans that combine long-term risk reduction, land and water management measures, and contingency actions triggered by early warnings. Plans will be endorsed by local authorities to ensure institutional uptake and resourcing.

Indicative activities:

- Select pilot communities based on Component 1 risk assessments and vulnerability criteria.
- Facilitate participatory risk mapping and planning workshops with diverse local stakeholders, including women and marginalised groups.
- Provide technical support to identify portfolios of measures covering: i) long-term risk reduction and land restoration (e.g., water efficiency, soil moisture conservation, rangeland rehabilitation); and ii) contingency actions for preparedness and response (e.g., water rationing protocols,

emergency livestock feed, targeted social support linked to triggers).

- Formalise plans and obtain endorsement by local authorities to ensure integration into sub-national planning and budget processes.

Output 2.1.2: Forecast-based drought-risk financing instruments designed, piloted and made accessible to eligible women and men

Innovative financial instruments will be designed and piloted to provide timely support to households and producers when drought thresholds are reached. Forecast-indexed insurance will utilise early warning triggers to enable predictable payouts, complemented by partnerships and financial literacy to support uptake.

Indicative activities:

- Undertake feasibility and market assessments for drought risk financing instruments, including index insurance linked to Component 1 early warning indicators.
- Design at least one pilot forecast-based insurance product (trigger thresholds, coverage, premiums, payout mechanisms) and define data-sharing protocols with NMHSs.
- Facilitate partnerships among government, insurers, reinsurers, and producer organisations to underwrite and deliver products.
- Deliver financial literacy and product training to improve understanding, trust, and uptake among target farmers and pastoralists.

Output 2.1.3: Community-led nature-based solutions for land and water resilience implemented and supported by maintenance and monitoring arrangements

Context-appropriate nature-based solutions will be implemented to restore degraded rangelands, enhance infiltration and soil moisture, stabilise productive systems, and deliver co-benefits for biodiversity. National catalogues will enable scale-up beyond pilot sites.

Indicative activities:

- Conduct technical assessments to select cost-effective NbS (e.g., rangeland restoration, agroforestry, riparian and wetland rehabilitation, contour bunds, mulching, water harvesting).
- Develop a nationally tailored catalogue of NbS measures to enable replication beyond project sites.
- Provide financial and technical support for community-led implementation, including labour-based approaches where appropriate.
- Establish community-based management and monitoring arrangements to sustain ecological and social performance of NbS.
- Develop local nurseries and supply chains for native species and drought-resilient varieties; support establishment of sub-national or national crop calendars adapted to seasonal forecasts and drought scenarios to optimise agronomic decisions and align with advisories from Component 1.

COMPONENT 3: DROUGHT GOVERNANCE, INSTITUTIONAL CAPACITY AND KNOWLEDGE SYSTEMS

This component strengthens institutional capacity, operationalises intersectoral coordination, advances regional drought services, embeds early warning and response within national policy and legal frameworks, and ensures systematic knowledge capture, communications, and gender mainstreaming.

Outcome 3.1. National institutions coordinate and deliver end-to-end drought-risk management effectively

This outcome develops end-to-end institutional capacity across monitoring, forecasting, risk and impact analysis, information services, and coordinated response. It integrates WMO standards, peer learning, and citizen science practices to enhance the quality, usability, and uptake of drought-related information and services, and to ensure that early warnings reliably trigger sectoral preparedness and response.

Output 3.1.1: Modular end-to-end drought-management capacity-development programme established and delivered to national and regional institutions

A modular capacity development programme, drawing on and complementing existing WMO, IDMP Community of Practice, and UNCCD Capacity Building Platform training, will strengthen technical and managerial competencies across relevant agencies. It will cover standards-based data handling, the generation, interpretation, and application of drought-related climate products and services, the use of risk and impact assessments in planning, and the design and operation of response mechanisms. The programme will explicitly build the technical capacity of RCC and NMHS experts, thereby contributing to the long-term sustainability of the regional climate services system.

Indicative activities:

- Conduct an institutional capacity needs assessment across agencies engaged in monitoring, forecasting, data management, risk and impact assessment, and mitigation/response.
- Design and deliver a modular curriculum spanning: i) monitoring and forecasting; ii) WIS 2.0 and WHOS data handling/standards and access; iii) application of HydroSOS concepts; iv) use of risk/impact assessments in sectoral planning; v) operational drought response SOPs; and vi) sustainability, calibration and long-term maintenance, and institutionalization of upgraded monitoring and forecasting systems.
- Organise regional peer learning, technical exchanges, and study tours to strengthen transboundary cooperation and common standards.
- Establish a technical assistance facility to provide on-demand support to national agencies.
- Provide training-of-trainers on snow depth measurement and citizen science mobilisation, including protocols for crowdsourced data via mobile applications and low-cost incentive schemes coordinated with telecom providers.

Output 3.1.2: National intersectoral drought coordination groups established, strengthened and operationalised

Mandated intersectoral groups will routinely review drought risk information, coordinate sectoral preparedness measures, and recommend the issuance of drought alerts to competent authorities, ensuring early warnings trigger predefined actions. These groups will be informed by regular drought bulletins and early warnings produced under Component 1 and will serve as the operational platform linking science to action.

Indicative activities:

- Establish National Drought Policy Working Groups comprising key ministries, NMHS, disaster management authorities, civil society, and private sector.
- Map existing coordination mechanisms and mandates; define membership, roles, and decision-making procedures for intersectoral drought groups.
- Adopt standing agendas and meeting schedules aligned to seasonal outlooks and monthly bulletins, institute minutes, action logs, and accountability arrangements.
- Develop and adopt inter-agency SOPs that link warning levels to predefined sectoral measures (agriculture, water, energy, health) and to public alert protocols.
- Conduct periodic simulation exercises to test SOPs and strengthen coordination across national and sub-national levels.

Outcome 3.2. Regional institutions provide coordinated and sustainable drought-related climate services

This outcome enhances regional climate service provision and coordination in support of drought risk management by advancing the establishment and operationalisation of a WMO-designated Regional Climate Centre (RCC) and regular Regional Climate (Outlook) Forums (RCOFs/RCFs). The RCC will comply with WMO standards and deliver the full suite of mandatory climate functions, while explicitly strengthening the provision of drought-relevant climate information and products to National Meteorological and Hydrological Services (NMHSs) and sectoral users across Central Asia. Complementary RCOFs/RCFs will provide a structured regional platform for consensus-based seasonal outlooks, harmonised messages, and co-production of user-oriented climate products, including for drought. The RCC will likely be hosted in Kazakhstan.

Output 3.2.1: Roadmap, governance, technical functions and sustainable-financing arrangements for a

WMO Regional Climate Centre with drought-support functions developed and operationalised

The project will advance the process towards a WMO-designated RCC (or related WMO Integrated Processing and Prediction System node) with defined regional drought-support functions⁷⁵, while recognising that RCC core functions extend beyond drought alone. It will build on the Central Asia Regional Climate Information Platform (CACIP), strengthen cryosphere and hydrological linkages, and develop capabilities to support a potential “Measurement Lead Centre for Glaciology” with regional partners. In parallel, it will institutionalise regular RCOFs/RCFs to underpin regional consensus-building and engagement with key sectors.

Indicative activities:

- Convene high-level dialogue with governments and WMO to confirm mandate and hosting arrangements.
- Prepare a roadmap and business plan detailing governance, technical functions, service portfolio, and sustainable financing.
- Upgrade host infrastructure and processes to meet WMO designation criteria, including compliance with WIS 2.0, WHOS integration, and service delivery standards.
- Support and submit the formal application for RCC designation.
- Design and institutionalise regular regional climate (outlook) forums, strengthening and linking existing mechanisms such as the North Eurasian Climate Outlook Forum (NEACOF) and Third Pole Climate Forum (TPCF) to reinforce regional communication, data sharing, and co-production of seasonal outlooks and sector-specific products, including for drought-sensitive sectors.

Outcome 3.3. National policy and regulatory frameworks enable proactive drought-risk management

This outcome embeds early warning and response within national policy and legal frameworks through evidence-based reform, codified SOPs, and clear institutional mandates, ensuring early warnings reliably translate into action and are supported by operational coordination groups and user-oriented bulletins from Component 1.

Output 3.3.1: Drought-related policy, legal and standard operating procedure reforms developed, validated and submitted to competent authorities

Policy and legislative recommendations will formalise roles and responsibilities, warning levels, and response triggers, aligning disaster risk management, sectoral mandates, and early warning protocols.

Indicative activities:

- Conduct socio-economic cost–benefit analyses to demonstrate the value of proactive drought management and inform prioritisation.
- Review existing legal and institutional frameworks to identify entry points for formalising EWS roles, responsibilities, warning levels, and response triggers.
- Facilitate multi-stakeholder drafting of policy and legislative recommendations, including codified SOPs linking warnings to predefined sectoral measures and public alert protocols.
- Support endorsement processes and submission of draft policy and legal reforms to competent authorities; conduct simulation exercises to validate operability of proposed SOPs.

Outcome 3.4. Drought knowledge, learning and stakeholder uptake strengthened

This outcome ensures systematic capture, curation, and uptake of knowledge and lessons; targeted communications and stakeholder engagement; and comprehensive gender mainstreaming. It leverages the UNCCD Drought Community of Practice to sustain regional peer learning and improves the quality and reach of climate services and adaptation measures, drawing on evidence and products generated in Components 1 and 2.

⁷⁵ Operational activities for seasonal prediction and climate monitoring; operational data services to support operational seasonal prediction and climate monitoring; and training in the use of operational RCC products and services.

Output 3.4.1: Multilingual communications and stakeholder-engagement system established and implemented

A strategic communication and engagement package will support policy uptake, behavioural change, and visibility through multilingual materials, national and regional fora, and sustained online presence.

Indicative activities:

- Develop a communication and stakeholder engagement strategy with audience mapping, messaging, and dissemination channels.
- Produce and disseminate tailored materials (brochures, policy briefs, explainer videos, radio segments, social media content) in local languages.
- Organise a project inception workshop and annual stakeholder forums at national and regional levels.
- Establish and maintain a project website and social media presence to provide timely updates and resources.

Output 3.4.2: Regional and national knowledge-management systems and communities of practice for drought-risk management established and operational

A formal knowledge management system will capture and synthesise evidence and lessons from Components 1 and 2 and governance reforms, ensuring they inform policy, practice, and scale-up. The regional community of practice will be anchored in and strengthen the UNCCD Drought Community of Practice, avoiding duplication and leveraging an established global platform for sustained exchange. The community of practice will also include regular national-level drought bulletins and sector-specific advisories will be co-produced and disseminated through multiple channels. Products will align with national coordination cycles and NEACOF to ensure relevance, usability, and continuous improvement based on feedback.

Indicative activities:

- Establish or strengthen cross-sectoral ministerial working groups for agriculture, water management, and drought response in each participating country.
- Co-design regular drought bulletins (bi-weekly or monthly) to inform cross-sectoral working groups with sector-specific information.
- Pilot dissemination of drought information and alerts via multiple channels with focus on last mile, including SMS and social media, and refine products based on user feedback. (support line ministries in their operations/mandate)
- Develop and implement a knowledge management strategy with protocols for capturing, curating, and sharing lessons, including linkages to regional and global platforms.
- Strengthen and utilise the UNCCD Drought Community of Practice for regional peer exchange and learning, including a dedicated Central Asia stream on the UNCCD platform. Training modalities will include, but not be limited to, cross-sectoral online events.
- Capacity building and training to develop e-learning course materials and to upload all related training resources from this project to the WMO Noodle portal. Since staff changes are common in these NMHSs, this will support sustainability and ensure easy access for new personnel. It would also be valuable to include dedicated materials in these courses on drought applications in the agriculture and energy sectors, as these two sectors are highly critical for this region and are significantly affected by drought.
- Produce and disseminate case studies, technical briefs, practitioner toolkits, and lessons-learned reports reflecting pilots, institutional innovations, and policy integration.
- Convene an end-of-project regional conference to share results and promote adoption and replication of successful approaches, with participation from government, practitioners, academia, and development partners.

Theory of Change

If Kazakhstan, Tajikistan and Uzbekistan jointly strengthen observation networks, harmonise drought-risk and impact methods, establish interoperable data systems and produce impact-based forecasts and

advisories (Component 1); if vulnerable communities use these services to prepare and implement inclusive drought plans, nature-based solutions and risk-financing instruments (Component 2); and if national and regional institutions acquire the mandates, capacity, coordination mechanisms, policies and knowledge systems needed to sustain these functions (Component 3), then institutions and at-risk women and men will be able to anticipate drought, take earlier and better-targeted action and reduce drought-related livelihood, economic and ecosystem losses. This will contribute to the project impact: increased climate resilience of vulnerable communities, productive sectors and shared ecosystems across Central Asia.

The pathway depends on: continued political commitment to regional cooperation; timely and sufficiently open exchange of quality-assured data; national agencies assigning staff and recurrent resources; forecasts and advisories being understandable, trusted and linked to predefined actions; women and vulnerable groups participating in decisions and accessing benefits; and pilot measures remaining technically, socially, environmentally and financially viable. Key risks include restrictions on data sharing, institutional turnover, uneven national capacity, weak uptake of warnings, exclusion of vulnerable groups, unsustainable operations and maintenance, maladapted risk-financing products and unintended local or transboundary effects of site-level interventions. The project addresses these risks through formal protocols and mandates, capacity transfer, inclusive co-design, multi-channel communication, safeguards screening, grievance mechanisms, maintenance planning and adaptive monitoring. A Theory of Change diagram is presented in Annex 2.

B. Describe how the project would promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms.

The ICDA project will promote new and innovative solutions to climate change adaptation by introducing advanced technologies, novel approaches, and mechanisms tailored to the Central Asian context.

Innovative monitoring and early warning systems

The project will deploy interoperable, climate-informed drought monitoring and forecasting systems that integrate ground-based sensors, remote sensing, and advanced modelling. These systems will leverage international standards (e.g., WMO guidelines) and enable real-time data sharing across the region, representing a significant advancement over current fragmented approaches.

Digital platforms and knowledge management

A regional, multilingual online platform will be established for open access to drought risk data, advisories, and technical guidance. This platform will incorporate user-driven design, interactive tools, and integration with national and WMO portals, facilitating rapid dissemination and uptake of climate information by decision-makers, practitioners, and communities.

Nature-based and financial innovation

The project will pilot nature-based solutions such as rangeland restoration, riparian buffer zones, and agroforestry, co-designed with local communities for scalability and cost-effectiveness. Innovative risk financing mechanisms, including forecast-based insurance and contingency funds, will be introduced to protect vulnerable households and incentivise proactive adaptation.

Participatory and gender-responsive mechanisms

The project will employ participatory planning, co-production of advisories, and gender-responsive action learning, ensuring that adaptation solutions are inclusive, context-specific, and responsive to the needs of women, youth, and marginalised groups.

Regional innovation ecosystem

By fostering partnerships with research institutions, private sector actors, and regional bodies, the project will support the co-design, testing, and scaling of adaptation innovations. Innovation challenges, peer exchanges, and South–South learning will further accelerate the adoption of new technologies and

practices across Central Asia.

Through these approaches, the ICDA project will catalyse a step-change in climate adaptation, bridging scientific advances, local knowledge, and practical solutions for lasting resilience.

Alignment with Adaptation Fund strategic objectives

The project directly advances the Adaptation Fund's strategic focus on concrete, locally led and scalable adaptation action:

- AF Outcome 2 / Output 2.1 — strengthened capacity of national and regional centres and networks to respond rapidly to extreme weather events: Component 1 strengthens interoperable drought monitoring, forecasting and early-warning systems, while Component 3 strengthens institutional capacity and coordination.
- AF Outcome 3 / Output 3.1 — strengthened awareness and ownership of adaptation and climate-risk reduction processes at local level: Components 1–3 co-produce accessible drought information and enable women, men and vulnerable groups to participate in community planning and governance.
- AF Outcome 4 / Output 4.1 — increased adaptive capacity within relevant development and natural-resource sectors: Component 2 implements community drought plans, nature-based solutions and forecast-based risk financing.
- AF Outcome 7 / Output 7.1 — improved integration of climate-resilience strategies into national and sectoral plans: Component 3 supports drought-policy, legal and standard-operating-procedure reforms.

The project also supports learning and sharing by establishing regional and national knowledge-management systems and communities of practice, and promotes innovation through harmonised risk methods, interoperable data services, impact-based forecasting and forecast-based financing.

C. Describe how the project would provide economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project would avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy of the Adaptation Fund.

Economic benefits

Integrated drought monitoring, risk assessment, and community-level adaptation will lower direct and indirect losses from crop failure, livestock mortality, and unplanned hydropower shut-downs. Early warnings generated under Component 1, coupled with nature-based interventions and risk financing piloted under Component 2, will help farming and pastoral households adjust planting dates, grazing rotations, and water allocations, stabilising yields and safeguarding household incomes that are already near subsistence thresholds. Diversified livelihood options such as drought-indexed insurance and value-added fodder production will open new revenue streams for women and youth, who face the highest income insecurity. At national scale, the project will enhance macro-economic stability by reducing fiscal outlays for emergency relief and by protecting export commodities such as cotton and wool. Enabling policies and institutional support under Component 3 will further reinforce these benefits. Ex-ante cost-benefit analysis undertaken during project preparation indicates avoided damages exceeding implementation costs by a factor of four over twenty years.

Social benefits

The project targets the most water-stressed districts along the Amu Darya and Syr Darya, where female-headed households, pastoralists, and seasonal migrants experience disproportionate exposure to drought. Participatory risk planning and social protection measures delivered through Component 2 will

embed the knowledge of these groups in local drought management plans, while gender-responsive training and institutional reforms under Component 3 will strengthen their decision-making power in community water councils. Improved pasture management and reliable water points will shorten daily water-collection journeys (tasks predominantly carried out by women and girls), freeing time for education and income-generating activities. Enhanced early warnings and agreed standard operating procedures, developed through Components 1 and 3, will reduce loss of life and displacement during multi-year drought episodes, reinforcing social cohesion and reducing potential conflict between up- and downstream users.

Environmental benefits

By restoring degraded rangelands, protecting high-elevation catchments, and piloting riparian buffer zones under Component 2, the project will reduce desertification, curb soil erosion, and improve infiltration, thereby moderating peak flows and sustaining base flows during dry seasons. Sustained glacier and snow monitoring, a core function of Component 1, will strengthen regional understanding of cryosphere dynamics, enabling adaptive reservoir operation that maintains ecological flows and preserves aquatic biodiversity. Nature-based solutions, such as shelter-belt plantations and wetland rehabilitation, will enhance carbon sequestration and create micro-climates that support pollinators and other keystone species.

Gender considerations

Recognising the differentiated vulnerabilities between the three target countries as described in Part I, the project will apply gender-responsive and socially inclusive approaches to strengthen drought resilience, ensuring equitable participation and benefits for women, youth, and vulnerable groups. Gender equality and women's empowerment form a cross-cutting priority of the Integrated Drought Management for Central Asia (IDCA) project. Women play a central role in agriculture, household water management, and community organisation across the region, yet they face disproportionate vulnerability to drought due to unequal access to resources, credit, technology, and decision-making processes. The project will therefore apply a gender-responsive approach consistent with the Adaptation Fund Gender Policy and Action Plan and the national gender equality frameworks of participating countries, with all gender mainstreaming activities embedded in Component 3.

A gender analysis will be conducted during the full proposal stage to identify gender-specific vulnerabilities, needs, and capacities relevant to drought risk management, early warning, and livelihood resilience. The findings will inform a project-specific Gender Action Plan with measurable targets and sex-disaggregated indicators. These will guide equitable participation in training, governance structures, and benefit sharing. All capacity building activities, ranging from hydrometeorological skills development (Component 1) to community drought planning (Component 2), will ensure balanced representation of women and men and, where relevant, create separate spaces for women's engagement to facilitate inclusive dialogue.

At the household and community level, the project will prioritise interventions that directly reduce gender-specific burdens. Improved water access and drought-resilient pasture and crop management under Component 2 will reduce the time women spend on water and fodder collection. Targeted livelihood diversification and microfinance opportunities will enhance women's economic independence, while institutional support for their participation in local water and drought management committees under Component 3 will strengthen leadership capacities. Continuous monitoring, led through Component 3, will ensure that implementation remains sensitive to cultural contexts while promoting equity, empowerment, and protection from gender-based discrimination or exclusion.

Alignment with Adaptation Fund policy

The IDCA project has been formulated in full accordance with the Adaptation Fund's policies, including the Environmental and Social Policy (ESP), Gender Policy and Action Plan, and the Medium-Term Strategy for 2018–2022 and beyond, which prioritises innovation, learning, and regional cooperation.

In line with the ESP, all project activities will be screened for potential environmental and social risks to ensure that they fall within acceptable impact categories. The project conforms to all 15 principles of the Policy, including protection of natural habitats, conservation of biodiversity, prevention of involuntary

resettlement, respect for human rights, and access to information and participation. A preliminary environmental and social screening has classified activities as Category B (site specific, minor or mitigable impacts). A comprehensive Environmental and Social Management Plan (ESMP), prepared under Component 3, will be developed during the full proposal stage, detailing mitigation and monitoring measures and establishing a grievance redress mechanism accessible in all beneficiary countries.

The project aligns with the Adaptation Fund Gender Policy by systematically integrating gender considerations throughout the project cycle, from design through implementation and evaluation, with oversight and reporting embedded in Component 3. It also upholds the Adaptation Fund's commitment to transparency, accountability, knowledge sharing, and country ownership by working through national implementing entities and in close coordination with regional mechanisms such as the Regional Climate Change Adaptation Strategy for Central Asia. Through this alignment, the project ensures environmentally sound, socially inclusive, and gender equitable adaptation that directly advances the Adaptation Fund's mandate of reducing climate vulnerability while promoting sustainable and resilient livelihoods.

Avoiding or mitigating negative impacts

Screening against the 2025 Environmental and Social Policy and Gender Policy has classified all activities as Category B or lower. During full proposal preparation, a detailed Environmental and Social Management Plan, developed under Component 3, will specify impact-avoidance and mitigation measures, including: i) siting of monitoring equipment outside sensitive habitats; ii) adherence to labour and occupational-health standards during small-scale construction; iii) culturally appropriate stakeholder engagement protocols that guarantee free, prior and informed participation of women, Indigenous peoples, and persons with disabilities; iv) a conflict-sensitive water-allocation framework that prevents downstream deprivation; and v) a transparent grievance-redress mechanism accessible in local languages. Periodic audits, gender-disaggregated indicators, and adaptive management coordinated through Component 3 will ensure continuous compliance and timely corrective action, safeguarding human rights and environmental integrity throughout implementation.

D. Describe or provide an analysis of the cost-effectiveness of the proposed project and explain how the regional approach would support cost-effectiveness.

The IDCA project offers a highly cost-effective approach to strengthening regional drought resilience through a coordinated, non-structural, and knowledge-based strategy. The project design maximises economic efficiency by leveraging existing institutions, infrastructure, and technical capacities across the three participating countries to implement a harmonised drought management framework, avoiding duplication of national efforts and generating economies of scale.

The regional approach enables the joint development and sharing of drought monitoring and forecasting systems, methodologies, and databases under Component 1, which would otherwise require significant separate investments by each country. Common protocols and regional technical working groups create savings in technical development and training while fostering interoperability of data and systems. By aligning with existing platforms such as the Central Asia Regional Climate Information Platform (CACIP) and established WMO mechanisms, the project builds upon current assets instead of establishing new institutions, ensuring efficient use of financial and human resources.

Cost-effectiveness is further ensured through the project's emphasis on soft measures—capacity development, risk assessments, institutional strengthening, and the integration of drought early warning into national decision-making frameworks (rather than capital-intensive, large-scale infrastructure). Experience from global best practice shows that each dollar invested in early warning and preparedness can yield between four and seven dollars in avoided losses. By establishing proactive, anticipatory systems, the project reduces reliance on expensive post-disaster recovery.

At the community level, Component 2 achieves cost-effectiveness through direct participation of local stakeholders in identifying and implementing low-cost, context-appropriate interventions such as nature-based solutions (e.g. rangeland restoration, agroforestry, wetland rehabilitation) and water use efficiency

measures. These generate multiple co-benefits for water security, soil conservation, biodiversity, and carbon sequestration while requiring limited financial input. Similarly, the development of forecast-based drought insurance mechanisms spreads financial risk and reduces public expenditure on emergency relief.

Sustainability and long-term cost efficiency are reinforced by strengthening the institutional capacity of national meteorological and hydrological services and other implementing agencies under Component 3. Investing in local human and institutional capital will diminish future dependence on external technical support, creating a persistent benefit stream beyond the project's lifetime. Knowledge management, regional cooperation, and gender-sensitive capacity development further promote replication and upscaling of cost-effective approaches throughout Central Asia.

An alternative to the proposed integrated and knowledge-based approach would be to adopt fragmented, country-specific or infrastructure-focused measures such as large reservoir development or emergency drought relief, which would entail significantly higher costs, longer lead times, and increased environmental risks while achieving narrower and less sustainable outcomes. The IDCA project therefore presents the most economically efficient and strategically coherent means of achieving lasting drought resilience in Central Asia. A more detailed quantitative cost-effectiveness analysis, including comparisons with alternative approaches and estimation of avoided damages, will be undertaken during full proposal development.

E. Describe how the project is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist. If applicable, please refer to relevant regional plans and strategies.

IDCA is consistent with the regional and national instruments listed below. For each instrument, the table identifies the specific objective or action advanced by the project and the outputs through which that contribution will be delivered. Alignment will be reconfirmed with the designated authorities during the PFG, and project activities will comply with applicable national laws, standards, permitting and safeguards requirements.

Country / level	Official plan or strategy and implementation period	Relevant goal / action / outcome	Specific IDCA contribution	Alignment / compliance status
Regional	Regional Strategy for Adaptation to Climate Change in Central Asia (to 2030); implementation plan under continuing regional review	To strengthen coordinated regional adaptation to shared climate risks through cooperation, knowledge exchange, compatible approaches and joint action.	Outputs 1.1.2, 1.1.3 and 1.2.1 establish harmonised methods, interoperable drought data and shared monitoring; Outputs 3.1.2, 3.2.1 and 3.4.2 strengthen coordination, regional climate services and learning.	Directly aligned. Implementation arrangements will be reconfirmed with the participating countries and the regional coordination mechanism during the PFG.
	CAREC Climate Change Action Plan 2025–2027	To identify gaps, prioritise and attract finance for regional climate action, and strengthen collaboration, including on the water–energy–food nexus, climate-smart agriculture, disaster risk management, capacity and knowledge.	Components 1–3 provide a regional drought-information system, climate-informed community action, institutional coordination and knowledge exchange across Kazakhstan, Tajikistan and Uzbekistan.	Aligned and complementary. IDCA does not depend on CAREC financing or implementation.
Kazakhstan	National Development Plan of the Republic of Kazakhstan to 2029 (2024–2029)	To advance sustainable, inclusive and productivity-led development, including environmental improvement, climate adaptation, efficient resource use and resilient infrastructure.	Components 1 and 2 improve drought-risk information and resilient land and water management for rural productivity; Component 3 embeds drought risk in institutional planning and coordination.	Aligned. Final wording and responsible institutions to be confirmed by the national focal point.
	Nationally Determined Contribution 3.0 (submitted 2025; target horizon 2035)	To strengthen climate resilience and adaptation, including in agriculture, water-resources	Outputs 1.1.2 and 1.2.1–1.2.2 strengthen risk assessment, monitoring and warnings; Outputs 2.1.1–2.1.3 support locally led	Directly aligned with the adaptation and resilience priorities of the current NDC.

Country / level	Official plan or strategy and implementation period	Relevant goal / action / outcome	Specific IDCA contribution	Alignment / compliance status
		management, forestry and disaster-risk reduction.	adaptation, risk finance and nature-based solutions.	
	Concept for Development of the Agro-Industrial Complex of the Republic of Kazakhstan for 2021–2030	To improve agricultural productivity and competitiveness, expand water-saving technology, strengthen rural incomes and address degradation of agricultural land.	Output 1.2.2 provides drought advisories for producers; Outputs 2.1.1 and 2.1.3 support drought planning, land restoration and efficient water use; Output 2.1.2 pilots financial protection.	Directly aligned, particularly where IDCA targets farmers and drought-prone rural livelihoods.
	Concept for Development of the Water Resources Management System of the Republic of Kazakhstan for 2024–2030	To strengthen water security through improved governance, monitoring, efficient use, infrastructure management, transparency and reduced vulnerability to scarcity and floods.	Outputs 1.1.3 and 1.2.1 improve hydrological data, interoperability and observation; Output 3.1.2 strengthens intersectoral drought coordination and Output 3.3.1 supports procedures and policy reform.	Directly aligned. Site-level activities will comply with the Water Code, permitting requirements and applicable basin arrangements.
Tajikistan	National Development Strategy of the Republic of Tajikistan for the Period up to 2030 (2016–2030)	To improve living standards through productive employment, food security, energy security, effective public administration and sustainable use of natural resources.	Component 2 protects drought-exposed rural livelihoods, food security and water security; Components 1 and 3 strengthen the information, institutions and governance required for resilient development.	Directly aligned.
	National Strategy for Adaptation to Climate Change of the Republic of Tajikistan for the Period up to 2030 (2019–2030)	To reduce climate vulnerability and strengthen adaptive capacity in priority sectors, including water, agriculture, ecosystems and disaster-risk management.	All three components deliver drought-risk information and early warning, community adaptation and nature-based solutions, and stronger institutions, policies and regional services.	Directly aligned.
	Updated Nationally Determined Contribution (submitted 2021; implementation to 2030)	To strengthen adaptation in climate-sensitive sectors through risk information, resilient agriculture and water management, disaster-risk reduction, capacity development and gender-responsive planning.	Outputs 1.1.2, 1.2.1–1.2.2, 2.1.1–2.1.3 and 3.1.1–3.3.1 directly support these adaptation priorities.	Directly aligned with the adaptation component of the current NDC.
	Programme for Development of the Agri-food System and Sustainable Agriculture for the Period up to 2030 (2023–2030)	To improve food and nutrition security and develop a productive, sustainable and resilient agri-food system.	Component 1 provides actionable climate information for producers; Component 2 supports drought plans, risk-financing pilots and resilient land/water practices; Component 3 strengthens extension, coordination and enabling procedures.	Directly aligned, particularly for farmer and rural-community beneficiaries.
Uzbekistan	“Uzbekistan–2030” Strategy (2023–2030; updated implementation framework)	To achieve inclusive and sustainable development, including water security, environmental sustainability, resilient agriculture and improved public institutions.	Components 1–3 strengthen risk-informed planning, efficient land and water management, resilient rural livelihoods and coordinated drought governance.	Aligned. Applicable targets and the current implementation programme will be reconfirmed during the PFG.
	Nationally Determined Contribution 3.0 (submitted 2025; target horizon 2035)	To pursue low-carbon, climate-resilient development and strengthen adaptation in agriculture, water resources, ecosystems, communities and climate-sensitive infrastructure.	Outputs 1.1.2, 1.2.1–1.2.2 and 2.1.1–2.1.3 deliver drought information, warnings, community plans, financial protection and nature-based resilience measures.	Directly aligned with the adaptation and resilience priorities of the current NDC.
	Strategy for Development of Agriculture of the Republic of Uzbekistan for 2020–2030	To build a competitive, sustainable and resource-efficient agri-food sector, strengthen food security, improve land and water management, and modernise services to farmers.	Output 1.2.2 provides climate advisories; Outputs 2.1.1–2.1.3 support planning, risk finance and nature-based land/water measures; Component 3 strengthens institutional capacity and knowledge.	Directly aligned, particularly for targeted farmers and producer groups.
	Water Sector Development Concept of the Republic of Uzbekistan for 2020–2030	To ensure reliable and efficient water use through improved accounting and monitoring, digital management, modernised irrigation and sound operation of water facilities.	Outputs 1.1.3 and 1.2.1 strengthen interoperable drought and hydrological information; Output 3.1.2 supports coordinated use of information and Output 3.3.1 supports procedures and policy implementation.	Directly aligned. Activities will comply with national water law, allocation rules, permitting and safeguards.
	Strategy for Achieving Gender Equality in the Republic of Uzbekistan until 2030 (2021–2030)	To ensure substantive equality, expand women’s participation and leadership, improve access to land, property, finance and decent work, and integrate gender into planning, budgets and statistics.	Gender-responsive activities, participation targets, sex-disaggregated indicators, accessible climate-information channels and equitable benefit criteria are integrated across all IDCA outputs and will be consolidated in the Gender Action Plan.	Directly aligned with the project’s cross-cutting gender equality and social inclusion requirements.

F. Describe how the project meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

The ICDA project will comply with all relevant national technical standards in Kazakhstan, Tajikistan and Uzbekistan. During the full proposal stage, specific standards and regulatory requirements will be identified through stakeholder consultations with national authorities, technical agencies, and local partners in each country. This will include but not be limited to national procedures for environmental and social impact assessment (e.g., Kazakhstan's Environmental Code and EIA regulations), building codes for any infrastructure or equipment installation, and technical standards for hydrometeorological monitoring and data management.

For example, in Kazakhstan, the project will adhere to the Environmental Code (2021) and associated EIA procedures for any activities with potential environmental impacts. In Uzbekistan, compliance will be ensured with national standards for water management and infrastructure safety. Where relevant, the project will also reference international standards, such as WMO guidelines for hydrometeorological equipment and data interoperability, and best practices for nature-based solutions and risk financing.

The project is fully committed to complying with the ESP of the Adaptation Fund throughout implementation. A preliminary environmental and social screening has been conducted, and a comprehensive Environmental and Social Management Plan (ESMP) will be developed during the full proposal stage to ensure compliance with the ESP. The ESMP will identify and address any potential environmental and social risks, outline mitigation measures, and ensure that all activities are implemented in a gender-responsive and inclusive manner, consistent with the Adaptation Fund's Gender Policy.

G. Describe if there is duplication of project with other funding sources, if any.

No significant duplication with other funding sources is anticipated. A structured screening of regional and national initiatives in Central Asia has been undertaken⁷⁶, including Adaptation Fund, GCF, GEF, CIF, SDC, USAID and BMZ-financed programmes on glacial hazards, integrated natural resources management, hydrometeorological modernisation, multi-hazard EWS and regional water governance. These investments have largely focused on: i) GLOF and flood risk reduction; ii) broader INRM and land degradation; iii) modernising observation networks and generic multi-hazard EWS; and iv) regional water and climate risk governance. None has systematically addressed end-to-end, drought-specific early warning linked to harmonised regional methodologies, dynamic drought risk and impact assessment, forecast-based risk financing, and nature-based solutions for drought resilience across all three Central Asian countries. The IDCA project is explicitly designed to complement and leverage these initiatives by: building on CAHMP and national hydromet upgrades to establish drought-specific monitoring and forecasting; using lessons from GLOF and flood EWS and multi-hazard systems to design impact-based drought services; linking with ongoing INRM and land-based projects to scale drought-relevant NbS; and embedding results within existing regional climate and water cooperation platforms. Coordination with relevant implementing entities (e.g. WMO, FAO, GIZ, SDC, USAID, UN agencies) and national authorities will continue throughout implementation to ensure complementarities, shared use of data and tools, and avoidance of overlap at both national and regional levels.

H. If applicable, describe the learning and knowledge management

⁷⁶ 2011–2019, Climate Investment Funds, Central Asia Hydrometeorology Modernization Project (CAHMP); 2011, GEF, Increasing Climate Resilience through Drinking Water Rehabilitation in North Tajikistan; 2016, GEF, Sustainable Cities: Integrated Green Urban Development in Ashgabat and Awaza; 2017–2024, GEF-6, Integrated Natural Resources Management in Drought-prone and Salt-affected Agricultural Production Landscapes in Central Asia and Turkey (CACILM2); 2017–2024, SDC, Strengthening of the Regional Institutional Framework for Integrated Water Resources Management in Central Asia (Blue Peace Central Asia); 2020–2025, Adaptation Fund, Reducing vulnerabilities of populations in the Central Asia region from glacier lake outburst floods in a changing climate (Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan); 2020–2025, GCF, Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan; 2018–2026, GCF, Climate services and diversification of climate-sensitive livelihoods to empower food-insecure and vulnerable communities in the Kyrgyz Republic; 2020–2025, USAID, Support to the Regional Water and Vulnerable Environment Activity; 2021–2027, GCF, Enhancing the Multi-Hazard Early Warning System to increase resilience of Uzbekistan communities to climate change induced hazards; 2022–2026, BMZ, Climate Risk Management in Central Asia; 2022, GEF, Strengthening the capacity of the Republic of Tajikistan to comply with the Enhanced Transparency Framework under the Paris Agreement; 2024–2031, GCF, Strengthening Climate Information and Multi-Hazard Early Warning Systems for Increased Resilience in Azerbaijan; 2025–2029, Adaptation Fund, Resilient Food Systems through Climate Services for Agriculture in Uzbekistan.

component to capture and disseminate lessons learned.

Learning and knowledge management is embedded across all components to systematically capture, synthesise, and disseminate lessons for replication and scale-up in line with Adaptation Fund requirements. Under Component 3, a regional knowledge management system will be established, with clear protocols for documentation, metadata, and quality assurance, anchored in an open, multilingual online platform that builds on existing regional infrastructure (e.g. CACIP) and is interoperable with WMO and national portals.

The project will produce tailored knowledge products—such as technical briefs on harmonised drought risk methods, guidance on co-produced sectoral advisories, implementation notes on nature-based solutions, safeguards and cost–benefit learning, and cryosphere monitoring manuals—translated into national languages to ensure accessibility. Iterative learning will be embedded through regular monitoring, evaluation, and learning loops, including defined learning questions, after-action reviews of early warning simulations, user-feedback surveys on advisories and bulletins, and adaptive updates to tools and protocols.

Knowledge will be integrated into policy and practice via periodic learning notes and policy roundtables under Component 3, and through the design of the regional coordination mechanism. A regional Community of Practice, convened under Component 3, will bring together national meteorological and hydrological services and sectoral agencies (water, agriculture, disaster risk reduction) for peer exchanges, study tours, and quarterly clinics, complemented by e-learning modules and in-person curricula on integrated drought management, impact-based forecasting, co-production, gender-responsive planning, and environmental and social risk management.

The approach will leverage South–South exchange with relevant regional initiatives and professional fora and promote dissemination through conferences and practitioner publications. Communication and outreach, also coordinated under Component 3, will generate accessible content (e.g. videos, radio, infographics, SMS) that supports end users and facilitates replication of community plans and nature-based solutions across the region.

I. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

A comprehensive consultative process was undertaken during the preparation of the ICDA project to ensure the participation of a wide range of stakeholders in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund. During early-stage project ideation, meetings with key country stakeholders were held to ensure inclusion and consultation. The “Joint Workshop on Regional Cooperation in Central Asia” in March 2024 brought together representatives from national hydrometeorological services, disaster risk management agencies, water and agriculture ministries, and regional organisations from Kazakhstan, Tajikistan, and Uzbekistan. This workshop confirmed the project’s focus and priorities and provided a platform for discussing regional needs and opportunities for collaboration.

To further inform project design, a detailed technical survey was distributed by the Multilateral Implementing Entity (MIE) to all Executing Entities (national meteorological services) in November 2025. The survey covered: i) national or regional initiatives to build on or coordinate with; ii) key data, tools, or capacity gaps to address; iii) the existence of drought policies, plans, or strategies; iv) current drought monitoring practices and indicators; v) alignment with national priorities or strategies; and vi) main challenges in drought management. Responses from all three countries were used to identify gaps, align project activities with national strategies, and ensure relevance to country needs. Key outcomes from the survey include scenarios where drought management is constrained more by information, tools, and institutional capacity than by the absence of policy commitments. Observation networks are too sparse, outdated, and weakly automated to capture spatial and temporal drought dynamics, especially soil

moisture and water availability in high-risk agricultural areas. Climate, hydrological, and agrometeorological data remain fragmented across agencies, with no integrated, user-oriented platforms linking observations, forecasts, impacts, and exposure. Operational drought early warning systems are either absent or embryonic, with limited use of seasonal forecasts, drought indices, and risk modelling for decision-making in agriculture and water allocation. Digital and analytical tools that translate data into actionable advice for farmers, water managers, and planners are underdeveloped. Human and institutional capacities to analyse climate information, interpret satellite products, and apply drought management instruments are insufficient, and formalised interagency protocols and triggers for response are largely missing.

The consultative process will continue during the full proposal development phase where a detailed stakeholder analysis and consultation process will be undertaken. Relevant groups including women, youth, people with disabilities and other vulnerable groups will be involved in further project development and refinement, ensuring a country- and region-driven approach with an emphasis on strengthening regional collaboration at the institutional and community levels. Gender considerations have been and will continue to be mainstreamed throughout the consultative process, with targeted outreach to women's organisations and gender experts to ensure that the specific needs and perspectives of women and other marginalised groups are reflected in project design and implementation. The ICDA project maintains a cross-cutting focus on vulnerable groups and gender-responsive adaptation.

J. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The total funding requested represents the full cost of adaptation, enabling the three countries to move from fragmented, reactive drought management to a proactive, integrated, and climate-resilient approach. These investments are essential to address the additional risks and vulnerabilities created by climate change and to ensure long-term resilience for communities, economies, and ecosystems across Central Asia.

All proposed outcomes and outputs can be delivered within the requested Adaptation Fund grant and the identified in-kind and beneficiary contributions. Their delivery is not contingent on the approval, financing or implementation of any other donor-funded project. Complementary initiatives described in Section G provide coordination opportunities, lessons, standards and baseline information only; they are not co-financing dependencies and do not finance any activity required to achieve the IDCA results.

Component 1: Harmonised drought monitoring, forecasting, early warning, and risk assessment

Baseline scenario (without Adaptation Fund resources)

Without project intervention, the three Central Asian countries will continue to rely on fragmented, outdated, and often incompatible drought monitoring and early warning systems. National hydrometeorological services face resource and capacity constraints, resulting in limited coverage, inconsistent data, and insufficient integration of climate change projections. Vulnerable communities and critical sectors remain exposed to increasing drought risk, with limited ability to anticipate or respond to climate shocks.

With-project scenario (with Adaptation Fund resources)

The requested funding will enable the establishment of harmonised, climate-informed monitoring, forecasting, and early warning systems at regional and national levels. This includes interoperable data platforms, standardised risk assessment methodologies, and sustained glacier and snow monitoring. These activities go beyond business-as-usual development and are essential for providing timely, actionable information to decision-makers and at-risk communities, directly addressing the additional risks posed by climate change

Component 2: Community drought resilience and risk financing

Baseline scenario

In the absence of the project, community-level adaptation remains ad hoc, under-resourced, and reactive. Vulnerable groups, especially women, youth, and pastoralists, have limited access to risk reduction tools, nature-based solutions, or financial protection mechanisms. Drought impacts continue to erode livelihoods, exacerbate poverty, and increase reliance on emergency relief, with little opportunity for proactive planning or diversification.

With-project scenario

AF resources will support the co-development and implementation of integrated community drought risk management plans, nature-based solutions, and innovative risk financing instruments such as forecast-based insurance. These interventions represent the full cost of adaptation, as they are specifically designed to address climate-induced drought risks, empower vulnerable groups, and build resilience beyond what is possible through standard development assistance.

Component 3: Drought governance, institutional capacity and knowledge systems

Baseline scenario

Existing policy and institutional frameworks are insufficiently equipped to manage the growing complexity and transboundary nature of drought risk. Knowledge management, gender mainstreaming, and regional cooperation are fragmented or absent, limiting the effectiveness and sustainability of adaptation efforts.

With-project scenario

The project will strengthen institutional and policy frameworks, establish regional coordination mechanisms, and embed knowledge management and gender-responsive action across all levels. Funding will support the development of enabling policies, capacity building, and regional knowledge platforms, ensuring that adaptation is institutionalised, inclusive, and scalable. These are additional costs required to address climate change impacts and would not be met under a business-as-usual scenario

K. Describe how the sustainability of the project outcomes has been taken into account when designing the project.

Institutional sustainability. National Meteorological and Hydrological Services will remain custodians of upgraded observation assets, data systems, forecasting tools and operational products. Relevant disaster-risk, water and agricultural authorities will maintain sector protocols and participate in the national intersectoral drought coordination groups. The designated regional mechanism/RCC will maintain agreed regional services, standards, data exchange and peer learning. Responsibilities will be incorporated into institutional mandates and formalised through implementation agreements, memoranda of understanding or equivalent commitments during full proposal preparation. Training-of-trainers, manuals, open-source tools and embedded technical assistance will reduce dependence on external expertise.

Financial sustainability. The full proposal will identify and cost recurrent staffing, station calibration and repair, communications, data hosting, licences where unavoidable, product generation, community-plan review, NbS maintenance and knowledge-platform administration. Participating institutions will confirm which costs will be absorbed through government budgets, service budgets or partner contributions after project closure. Procurement will apply life-cycle costing, warranties, supplier support and e-waste take-back provisions. A costed operations-and-maintenance plan and written partner commitments will be completed during the PFG/full proposal stage.

Economic sustainability. Shared regional methods and infrastructure will reduce duplication and unit costs, while impact-based warnings, contingency planning and risk-financing pilots are expected to reduce avoidable drought losses and protect livelihoods. Products will be designed around demonstrated user demand and incorporated into routine public services. Risk-financing pilots will be subject to affordability, consumer-protection and market-feasibility assessment before scale-up.

Social sustainability. Women, youth, persons with disabilities, smallholders, pastoralists and other vulnerable groups will participate in decisions through representation in community planning, implementation and monitoring bodies, not solely through consultation. Community drought plans and NbS arrangements will specify locally agreed roles, benefit-sharing, maintenance responsibilities and

grievance channels. Capacity development and accessible, multilingual communication will enable continued use of project services.

Environmental sustainability. Site-specific interventions will prioritise native species, ecosystem-based approaches, water and soil conservation and avoidance of critical habitats. The ESMP will include screening, biodiversity and soil safeguards, climate-risk checks, monitoring, corrective action, e-waste management and decommissioning requirements. Community and responsible-agency maintenance arrangements will be established before handover.

Arrangements still requiring confirmation. During the PFG/full proposal stage, WMO and country partners will confirm the host and governance of the regional mechanism/RCC; asset ownership; national budget lines and recurrent-cost commitments; O&M standards and service levels; data-sharing and cybersecurity responsibilities; and the legal instruments used to formalise post-project responsibilities.

L. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project.

A preliminary screening of the Integrated Drought Management for Central Asia (IDCA) project against the Adaptation Fund's 15 environmental and social principles has been conducted. IDCA will be designed and implemented in accordance with the Adaptation Fund Environmental and Social Policy and Gender Policy, including their screening, assessment, consultation, management, monitoring, grievance and reporting requirements. The project is anticipated to be classified as Category B (potential adverse impacts that are limited, generally site-specific, and readily mitigatable) or lower. Project activities are primarily focused on regional systems harmonisation, institutional capacity-building, and targeted, site-specific interventions such as installation of monitoring equipment, piloting of nature-based solutions, and demonstration of risk financing instruments. No high-risk triggers have been identified: there is no involuntary resettlement, no conversion of critical habitats, and no large-scale civil works.

The project is intended to generate positive transboundary benefits through shared methods, data and climate services; however, potential transboundary risks have been considered. These include unequal access to regional data and services; inconsistent national warning thresholds or messages; restrictions, privacy or security concerns affecting cross-border data exchange; downstream or cross-border effects from site-specific land and water interventions; exclusion of particular countries or vulnerable groups from regional benefits; and disputes concerning interpretation or use of shared-basin information. No large-scale infrastructure, dam construction or reallocation of transboundary water is proposed.

During full proposal preparation, the ESIA/ESMP process will screen pilot locations and cumulative and transboundary effects; apply the no-harm principle and applicable national legal requirements; establish agreed data-sharing, validation, warning and escalation protocols; assess downstream effects of site-level measures; and provide accessible national and regional grievance channels. Activities with material unresolved transboundary impacts will not proceed until acceptable avoidance or mitigation arrangements are agreed.

Anticipated risks are minor and reversible, including temporary disturbance during equipment installation, limited waste generation (including e-waste), and potential barriers to equitable access for marginalised groups. These risks are readily addressed through a proportionate ESMP incorporating site screening, legal compliance, contractor EHS requirements, biodiversity and heritage screening, e-waste management, and robust stakeholder engagement. The ESMP will be complemented by a Stakeholder Engagement Plan with inclusive modalities and a multilingual grievance redress mechanism, as well as a Gender Action Plan and safeguarding protocols to ensure safe, equitable participation and benefit-sharing. Data protection and privacy will be governed by a regionally harmonised framework, embedding privacy-by-design and role-based access controls.

Principles 1 (Compliance with the Law), 4 (Human Rights) and 6 (Core Labour Rights) apply to all project activities. Compliance requirements, risks and proportionate management measures will be further assessed and documented through the ESIA/ESMP and related implementation instruments during full proposal preparation.

Checklist of environmental & social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the law		Low risk requiring targeted assessment: Key risks involve permitting for monitoring equipment, compliance with national and regional data protection laws for information platforms, and adherence to occupational health and safety standards during fieldwork and infrastructure upgrades. Risk management will comprise a legal compliance register, permit matrix, contractor EHS requirements, and data governance protocols. Additional assessment required
Access and equity	Additional assessment required	Low risk with ongoing monitoring: The project aims for equitable access to drought information, risk financing, and resilience measures for all communities, including marginalised groups. Risks include reduced access for remote populations to early warning systems or financial products. Targeted outreach, inclusive consultation, and beneficiary monitoring will ensure equity. Further assessment will identify and address access barriers.
Marginalised and vulnerable groups	Additional assessment required	Low to moderate risk requiring targeted assessment: The project prioritises inclusion of vulnerable groups, including women, the poor, and those in drought-prone or remote areas. Risks include exclusion from participatory planning, risk financing, or benefit-sharing, and limited accessibility of new technologies or financial instruments. Targeted engagement, participatory planning, and monitoring will be implemented to ensure their effective inclusion.
Human rights		Very low risk: The project upholds international human rights standards, including the right to information, participation, and non-discrimination. No activities are anticipated that would contravene human rights. Ongoing stakeholder engagement and a grievance redress mechanism will be established to address any concerns. Additional assessment required
Gender equality and women's empowerment	Additional assessment required	Low to moderate risk requiring targeted assessment: The project promotes gender equality and women's empowerment through targeted activities, gender-responsive planning, and monitoring. Risks include women's participation being constrained by social norms and benefits accruing disproportionately to men. A comprehensive gender analysis and Gender Action Plan will be developed, and gender-disaggregated indicators integrated into the M&E framework.

Checklist of environmental & social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Core labour rights		Low risk: The project will comply with national and international labour standards, including prohibitions on child and forced labour, and will ensure safe working conditions for all project staff and contractors. Labour management procedures and codes of conduct will be established. No significant risks are anticipated Additional assessment required
Indigenous peoples	Additional assessment required	Low risk with further screening: The presence and status of indigenous peoples in the project area will be confirmed during the full proposal stage. If present, the project will safeguard their rights to consultation, participation, benefit-sharing, and conduct Free, Prior and Informed Consent processes as required. Risks relate to possible exclusion and impacts on traditional knowledge and practices. Screening will be undertaken and, if necessary, an Indigenous Peoples Plan will be developed.
Involuntary resettlement	Additional assessment required	Very low risk: No involuntary resettlement is anticipated, as the project does not involve land acquisition or activities that would require displacement. All infrastructure upgrades and field activities will be designed to avoid physical or economic displacement. This will be confirmed through site screening and stakeholder consultation during the full proposal stage.
Protection of natural habitats	Additional assessment required	Low to moderate risk requiring targeted assessment: The project includes nature-based solutions and infrastructure upgrades that may interact with natural habitats. Risks include potential disturbance during construction or restoration activities. Site selection, environmental screening, and mitigation measures will be applied to avoid or minimise impacts. An Environmental and Social Management Plan (ESMP) will include protocols for habitat protection and restoration.
Conservation of biological diversity	Additional assessment required	Low to moderate risk requiring targeted assessment: Activities such as rangeland restoration, agroforestry, and introduction of drought-resilient species may affect local biodiversity. Risks include the potential introduction of non-native or invasive species and disturbance to local flora and fauna. The project will prioritise native species and ecosystem-based approaches, with biodiversity assessments and management measures included in the ESMP.
Climate change	Additional assessment required	Low risk: The project is designed to enhance climate resilience and adaptation, with no significant greenhouse gas emissions or

Checklist of environmental & social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		activities that would increase climate vulnerability. All interventions will be screened for climate risk and alignment with national adaptation priorities
Pollution prevention and resource efficiency	Additional assessment required	Low risk with targeted management: Minor risks may arise from the generation of waste (e.g., packaging, obsolete equipment, e-waste from monitoring devices) and resource use during construction and restoration activities. The project will implement resource efficiency measures, waste minimisation, and e-waste management protocols, including take-back clauses for suppliers and contractors
Public health	Additional assessment required	Low risk: The project is expected to have positive impacts on public health by reducing drought-related risks and supporting resilient livelihoods. Minor risks may arise during field activities (e.g., exposure to dust, noise, or hazardous materials). OHS protocols and community health and safety measures will be implemented.
Physical and cultural heritage	Additional assessment required	Low risk with further screening: No activities are planned in areas of known physical or cultural heritage. However, there is a minor risk of encountering undocumented heritage sites during fieldwork or construction. Chance-find procedures and stakeholder consultation will be included in the ESMP to ensure protection
Lands and soil conservation	Additional assessment required	Low to moderate risk requiring targeted assessment: The project's nature-based solutions and land management activities are designed to improve soil health and prevent degradation. However, there is a risk that poorly designed interventions could lead to erosion or loss of soil fertility. Site-specific assessments and best-practice guidelines will be applied to ensure positive outcomes for land and soil conservation.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Demonstrate how the project aligns with the Results Framework of the Adaptation Fund

The proposed project's overall and specific objectives, as well as the anticipated project outcomes align closely with several Fund outcomes (2 and 3) and outputs (2.1, 3.1, 4.1, and 7.1). Table 6 cross-references the objectives and outcomes of the proposed project to the respective fund outcome and output, including the relevant project and fund indicators and the corresponding amount of funding requested.

Table 9. Overview of alignment with the Adaptation Fund Strategic Results Framework

Project objective / outcome ⁷⁷	Project objective / outcome indicator	Fund outcome / output	Fund outcome / output indicator	Grant amount (USD)
Operationalise the Central Asia Regional Drought Strategy through harmonised monitoring and early warning, strengthened institutional and policy frameworks, and inclusive, gender-responsive drought adaptation for vulnerable communities and sectors in Kazakhstan, Tajikistan and Uzbekistan.	Regional and national drought monitoring and early-warning systems operational; Institutional and policy capacity for inclusive drought-risk management enhanced; Community adaptation, nature-based solutions and drought-risk financing implemented; Regional knowledge-management and cooperation mechanisms established.	Fund Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses. Fund Outcome 3: Strengthened awareness and ownership of adaptation and climate-risk reduction processes at local level.	2.1.2: Number of targeted institutions with increased capacity to minimise exposure to climate variability risks. 2.1.3: Number of coordination mechanisms established or strengthened to support climate resilience. 3.1.1: Number and type of risk-reduction actions or strategies introduced at local level. 3.1.2: Percentage of the targeted population aware of predicted adverse impacts of climate change and appropriate responses.	20,000,000
Total objective-level grant amount				20,000,000
Project outcome	Project outcome indicator	Fund output	Fund output indicator	Grant amount (USD)
Outcome 1.1: Climate-responsive drought risk and impact assessment institutionalised across the participating countries.	Number of participating countries with institutionalised, climate-responsive drought risk and impact assessment systems.	Fund Output 2.1: Strengthened capacity of national and regional centres and networks to respond rapidly to extreme weather events.	2.1.1: Number of staff and technical experts trained in climate-responsive drought risk and impact assessment methodologies. 2.1.2: Number of national and regional institutions equipped with operational drought risk and impact assessment tools and protocols.	3,000,000
Outcome 1.2: National and regional drought monitoring, forecasting and early-warning services strengthened and used for anticipatory decision-making.	Number of participating countries with operational, interoperable drought monitoring, forecasting and early-warning systems and services used for anticipatory decision-making.	Fund Output 2.1: Strengthened capacity of national and regional centres and networks to respond rapidly to extreme weather events.	2.1.1: Number of national and regional drought monitoring and early-warning systems upgraded or established in line with WMO standards. 2.1.2: Number of technical staff and end-users trained in the use and interpretation of drought monitoring, forecasting and early-warning products.	4,500,000
Outcome 2.1: Vulnerable communities apply inclusive, climate-informed measures that reduce drought exposure and sensitivity.	Number of target communities implementing operational, locally endorsed and inclusive drought-risk management and contingency plans, risk-financing measures and nature-based solutions.	Fund Output 4.1: Development and implementation of innovative adaptation solutions and risk-reduction measures in relevant sectors.	4.1.1: Number and type of community-based drought-risk management and contingency plans developed and operationalised. 4.1.2: Number of nature-based solutions for land and water resilience implemented and maintained by communities.	6,000,000

⁷⁷ The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

Outcome 3.1: National institutions coordinate and deliver end-to-end drought-risk management effectively.	Number of national institutions with enhanced technical and managerial capacity and operational coordination arrangements for end-to-end drought-risk management.	Fund Output 2.1: Strengthened capacity of national and regional centres and networks to respond rapidly to extreme weather events.	2.1.1: Number of staff and technical experts trained in end-to-end drought-risk management, including monitoring, forecasting and response. 2.1.2: Number of institutions with operational standard operating procedures and coordination mechanisms for drought-risk management.	1,950,000
Outcome 3.2: Regional institutions provide coordinated and sustainable drought-related climate services.	Number of regional climate-service institutions or platforms with strengthened capacity, agreed functions and sustainable arrangements to provide drought services.	Fund Output 2.1: Strengthened capacity of national and regional centres and networks to respond rapidly to extreme weather events.	2.1.3: Number of regional centres and networks with increased capacity to support climate resilience, including through climate information and services.	980,000
Outcome 3.3: National policy and regulatory frameworks enable proactive drought-risk management.	Number of participating countries that have developed, adopted or revised drought-related policies, legal instruments or standard operating procedures.	Fund Output 7.1: Improved integration of climate-risk information into policy, planning and decision-making processes.	7.1.1: Number, type and sector of policies introduced or adjusted to address climate-change risks.	1,300,000
Outcome 3.4: Drought knowledge, learning and stakeholder uptake strengthened.	Percentage of targeted stakeholders, disaggregated by sex and relevant vulnerability characteristics, with increased awareness and use of drought-risk information and adaptation options.	Fund Output 3.1: Targeted population groups participating in adaptation and risk-reduction awareness activities.	3.1.2: Percentage of the targeted population aware of predicted adverse impacts of climate change and appropriate responses.	2,270,000
Total outcome-level grant amount				20,000,000

B. Management arrangements

This project's implementation structure and management arrangements are designed to ensure robust governance, technical excellence, and inclusive participation, in full compliance with Adaptation Fund guidance and standards.

Multilateral Implementing Entity (MIE)

The World Meteorological Organization (WMO) will serve as the Multilateral Implementing Entity, holding overall fiduciary, technical, and reporting responsibility in accordance with Adaptation Fund requirements. WMO will ensure compliance with the Fund's Environmental and Social Policy, Gender Policy, and fiduciary standards, and will oversee project execution, financial management, procurement, and monitoring and evaluation. The WMO-GWPO Technical Support Unit, supported by a network of Support Base Partners, will provide technical leadership, design solutions, and ensure the integration of global best practices and standards. WMO will facilitate coordination with the Adaptation Fund, submit required reports, and ensure that all project activities align with approved objectives and safeguards.

Executing Entities (EEs)

Project execution will be carried out by a consortium of national and regional entities. At the regional level, GWP-CACENA and CAREC will coordinate and implement cross-border activities, knowledge management, and regional capacity building. At the national level, the National Meteorological and Hydrological Services (NMHSs) in Kazakhstan, Tajikistan, and Uzbekistan will serve as primary executing partners, responsible for country-level implementation, data management, and stakeholder engagement. CAREC and GWP-CACENA will support national execution and facilitate linkages with local institutions. The Food and Agricultural Organization of the United Nations (FAO) will provide technical support for the adaptation and deployment of the Agriculture Stress Index System (ASIS) for regional drought monitoring. UNCCD will manage policy-level engagement and ensure alignment with national and regional drought

strategies.

Project Management Unit (PMU) and Supporting Structures

A dedicated Project Management Unit, led by a full-time project manager based in the region, will oversee day-to-day implementation, coordination, and risk management. The PMU will be responsible for work planning, procurement, financial management, monitoring and evaluation, and reporting. The project manager will ensure inclusive stakeholder engagement, gender mainstreaming, and compliance with environmental and social safeguards. The PMU will be supported by technical specialists, administrative staff, and monitoring and evaluation experts, and will coordinate closely with executing partners at all levels.

Community-Level Engagement and Support

At the community level, GWP CACENA Country Water Partnerships will facilitate local engagement, capacity building, and the implementation of community-based adaptation measures. Partnerships with organisations such as Caritas and the Red Cross will be pursued to strengthen outreach to vulnerable groups and ensure effective delivery of adaptation solutions at the grassroots level.

Steering Committee and Governance

A multi-stakeholder Steering Committee will be established to provide strategic guidance, oversight, and coordination. The committee will include representatives from WMO, GWP-CACENA, CAREC, FAO, UNCCD, NMHSs, national authorities, and key stakeholders, including civil society and gender experts. The Steering Committee will review progress, address challenges, and ensure alignment with national and regional priorities, as well as Adaptation Fund policies.

Institutional Collaboration and Agreements

Collaboration with national and regional entities will be formalised through memoranda of understanding, institutional agreements, and regular workshops. These arrangements will clarify roles, responsibilities, and reporting lines, and will ensure effective coordination, knowledge exchange, and sustainability of project outcomes.

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

A. Record of endorsement on behalf of the government⁷⁸

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

H.E. Mr. Aziz Abdukhakimov, Minister, Ministry of Ecology, Environment Protection and Climate Change of Uzbekistan	Date: 4 April 2026
Mr. Bahodur Sheralizoda, Chairman, Committee for Environmental Protection under the Government of the Republic of Tajikistan	Date: 10 February 2026
Mr Mansur Oshurbayev, Vice-Minister, Ministry of Ecology and Natural Resources	Date: 5 December 2025

B. Implementing Entity certification

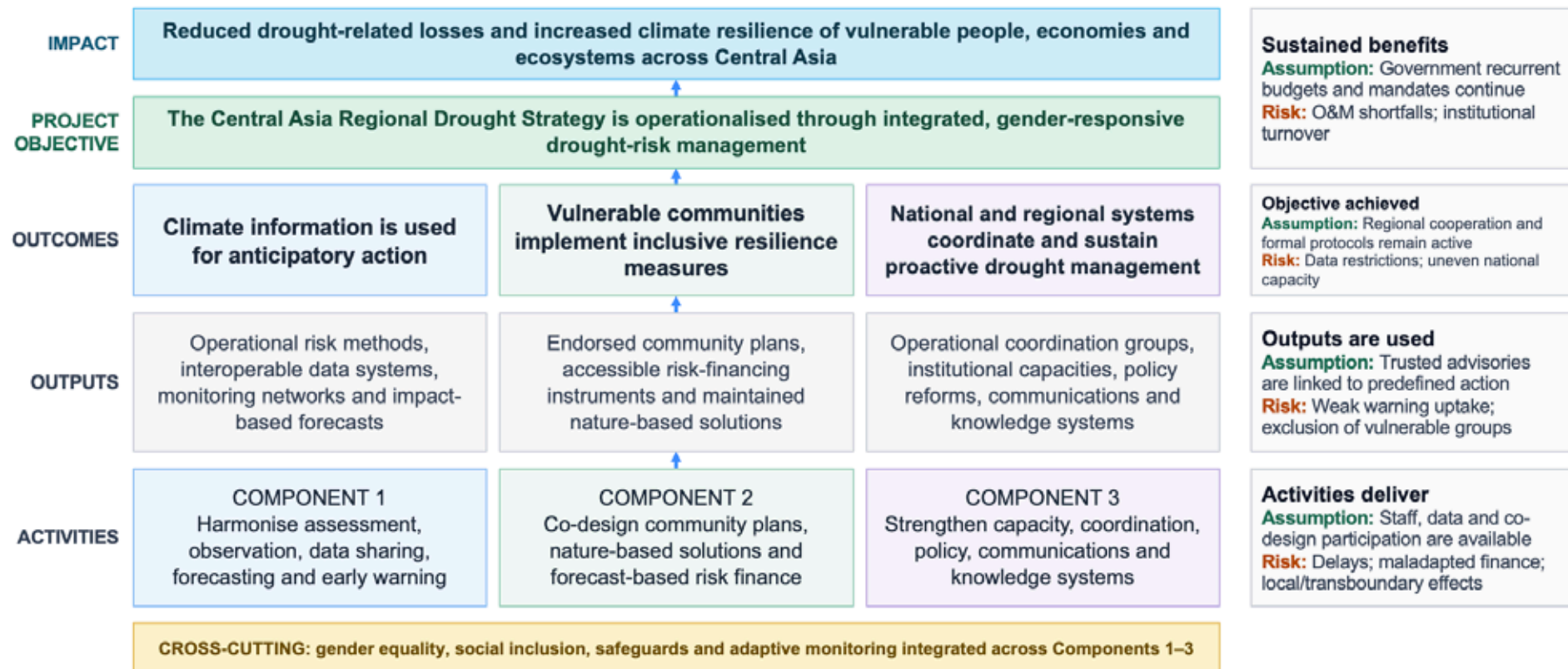
Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project contact person's name, telephone number and email address

<i>Moyenda Chaponda</i>	
Moyenda Chaponda Implementing Entity Coordinator Development Partnerships Office, WMO	
Date: 11 June 2026	Tel. and email: +41 22 730 8646; mchaponda@wmo.int
Project Contact Person: Ms. Petra Mutic	
Tel. and email: +41227308209 PMutic@wmo.int	

⁷⁸ 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.

ANNEX 2: THEORY OF CHANGE

Causal pathway from project action to climate-resilient people, economies and ecosystems



ANNEX 3: Initial consultation report

Full Initial Consultation Report: [Initial Consultation Report CN IDCA.pdf](#)

A stakeholder consultation process was undertaken during project preparation to ensure alignment with national and regional priorities and compliance with the Adaptation Fund's Environmental and Social Policy (ESP) and Gender Policy. Consultations involved national meteorological and hydrological services, disaster risk management agencies, ministries responsible for water resources and agriculture, regional organizations, technical experts, and development partners.

The project was initially conceived as a five-country regional initiative involving Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. While the current Concept Note focuses on Kazakhstan, Tajikistan, and Uzbekistan, both Kyrgyzstan and Turkmenistan participated in the pre-concept discussions and expressed strong interest in joining the initiative. Due to institutional and governmental transition processes, they were unable to formally participate in the present Concept Note but are expected to be re-engaged during the Project Formulation Grant (PFG) phase with a view to participating in the Full Proposal.

Key Consultation Findings

Key Issue	Implication for Project Design
Gaps in drought monitoring and forecasting	Strengthen drought monitoring, forecasting, and early warning systems
Fragmented climate and water information	Develop integrated drought information and decision-support systems
Limited institutional and technical capacities	Provide capacity development and technical training
Weak coordination among sectors and countries	Strengthen regional cooperation and knowledge-sharing mechanisms
Need for improved drought preparedness	Support drought planning, risk assessment, and response frameworks

The consultation process will continue during the PFG phase through targeted engagement with government agencies, women and women's organizations, youth groups, persons with disabilities, smallholder farmers, civil society organizations, and other vulnerable groups. Findings from these consultations will inform the project's Gender Assessment, Gender Action Plan, Environmental and Social Management Plan (ESMP), stakeholder engagement framework, and final project design.

Note: Additional consultations will be undertaken during full proposal development, including continued engagement with Kyrgyzstan and Turkmenistan, to strengthen the regional scope of the initiative and ensure that project interventions reflect national priorities and the needs of vulnerable populations across Central Asia.

ANNEX 4: Initial gender assessment

Full Initial Gender Assessment Report: Attached separately

The Initial Gender Assessment covers Kazakhstan, Tajikistan and Uzbekistan and examines how gender roles, access to productive resources and services, representation in decision-making, unpaid care, labour migration and social norms shape exposure and adaptive capacity in relation to drought. Women are not a homogeneous group: location, income, age, disability, household composition, livelihood and migration status create intersecting advantages and constraints. The assessment therefore combines sex-disaggregated national statistics with qualitative evidence and will be validated through consultations with women's organisations, producer groups, water-user organisations, technical agencies and vulnerable communities during the PFG.

For each country, add a two- to three-paragraph evidence profile covering: (i) women's and men's employment and roles in agriculture, livestock, water and household water management; (ii) land ownership/use rights, irrigation, finance, extension, mobile/internet and climate-information access; (iii) unpaid care and time burdens; (iv) female-headed households and labour-migration effects; (v) representation in water, disaster-risk, climate and hydrometeorological institutions; and (vi) relevant norms affecting mobility, training and leadership. Every statistic must state the year and source.

Project implications and entry points

The evidence will be translated into project design through: user research and gender-responsive dissemination channels under Component 1; minimum participation and leadership targets for women in community planning and national coordination mechanisms; training schedules, locations and modalities that address care and mobility constraints; transparent eligibility and benefit monitoring for nature-based solutions and risk-financing pilots; safeguards against exclusion, harassment and gender-based violence; sex-, age- and, where feasible, disability-disaggregated indicators; and gender-responsive budgets and responsibilities consolidated in the GAP.

Evidence gaps and PFG follow-up

The PFG will validate who controls and uses climate information, how warnings are received and acted upon, women's membership and influence in relevant organisations, access to land/irrigation/finance/extension, time-use constraints, digital access, preferred communication channels and potential protection risks. Findings will set baselines and targets and will be recorded separately for Kazakhstan, Tajikistan and Uzbekistan.

The assessment supports the commitment of the Implementing and Executing Entities to integrate gender-responsive approaches throughout project design and implementation and aligns with the Adaptation Fund Gender Policy and Action Plan, as well as national gender equality and climate adaptation policies of the participating countries.

Key Barriers related to Gender Equality and Inclusion in Drought Risk Management and Climate Adaptation:

Barrier	Description
Limited participation in water and drought governance	Women remain underrepresented in water user associations, drought management structures, and climate-related decision-making processes.
Unequal access to climate information and services	Women, particularly in rural areas, may have lower access to digital technologies, climate information, and early warning services.
Limited access to productive resources	Women often face constraints in accessing land, irrigation infrastructure, finance, agricultural inputs, and extension services, reducing adaptive capacity.
Underrepresentation in hydrometeorological and technical professions	Women remain underrepresented in climate science, hydrology, meteorology, and related technical fields.
Time poverty and unpaid care responsibilities	Household and caregiving responsibilities may limit women's participation in training, consultations, and adaptation planning processes.

Opportunities for Gender-Responsive Programming

Opportunity	Action
Strengthen inclusive climate services	Ensure drought monitoring, forecasting, and early warning information is accessible and tailored to the needs of women and vulnerable groups.
Promote women's participation in drought governance	Support women's representation and leadership in national and local drought management and water governance mechanisms.
Build technical capacity and leadership	Encourage participation of women and young professionals in hydrometeorology, climate services, water management, and drought planning through targeted training and mentoring.
Enhance livelihood resilience	Promote gender-responsive drought adaptation measures, including climate-resilient agriculture, water management practices, and nature-based solutions.
Strengthen regional knowledge exchange	Facilitate sharing of good practices on gender-responsive drought management and climate adaptation across Central Asia

Note: This initial gender assessment will be further developed during the next phase of project preparation through consultations with national and local stakeholders, including women's organizations, community representatives, youth groups, vulnerable populations, and relevant government institutions. The findings will inform the development of a comprehensive Gender Action Plan and gender-responsive monitoring framework for the full project proposal.



010000, Астана қ., Мәңгілік Ел даңғылы, 8
«Министрліктер үйі», 15-кіреберіс
тел.: +7 7172 74-08-44

010000, Astana city, Mangilik El avenue, 8
«The House of Ministries», entrance 15
tel.: +7 7172 74-08-44

5/12/2025 № 04-12/25348

**To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat**

Email: Secretariat@Adaptation-Fund.org

Fax: 202 522 3240/5

Subject: Endorsement for Integrated Drought Management for Central Asia (IDCA)

In my capacity as designated authority for the Adaptation Fund in the Republic of Kazakhstan, I confirm that the above national grant 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 the Republic of Kazakhstan.

Accordingly, I am pleased to endorse the above grant proposal with support from the Adaptation Fund. If approved, the project will be implemented by the World Meteorological Organization and executed by Central Asia Regional Environmental Centre (CAREC), Global Water Partnership Organisation (GWPO), Global Water Partnership Central Asia and Caucasus (GWP CACENA), Food and Agriculture Organization (FAO), and National Meteorological and Hydrological Services of the Central Asian countries.

Sincerely,

Mr. Mansur Oshurbayev
Vice-minister of Ecology and Natural
Resources of the Republic of Kazakhstan

Tel.: + 7 (7172) 74-01-97

Email: m.oshurbaev@ecogeo.gov.kz

Alternative emails: climatekaz48@gmail.com;

sh.tastemirova@ecogeo.gov.kz

000034

КУМИТАИ
ҲИФЗИ МУҲИТИ ЗИСТИ
НАЗДИ ҲУКУМАТИ
ҶУМҲУРИИ ТОҶИКИСТОН



КОМИТЕТ ПО
ОХРАНЕ ОКРУЖАЮЩЕЙ СРЕДЫ
ПРИ ПРАВИТЕЛЬСТВЕ
РЕСПУБЛИКИ ТАДЖИКИСТАН

734034, шаҳри Душанбе, кӯчаи Шевченко
Тел./факс: (992 37) 223-35-40
Веб-сайт: www.tajnature.tj
Почтаи электронӣ: info@tajnature.tj

734034, город Душанбе, улица Шевченко
Тел./факс: (992 37) 223-35-40
Веб-сайт: www.tajnature.tj
Электронная почта: info@tajnature.tj

**COMMITTEE OF ENVIRONMENTAL PROTECTION
UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN**

Shevchenko str., 734034, Dushanbe city, tel./fax (992 37) 223-35-40 web-site: www.tajnature.tj, e-mail: info@tajnature.tj

№ 1/18-03-72 from «10» 02 2026

To _____ from « » _____ 2026

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

Subject: Endorsement for Integrated Drought Management for Central Asia (IDCA)

In my capacity as the Designated Authority in the Republic of Tajikistan to the Adaptation Fund, I confirm that the above regional project concept note is in accordance with the government's regional priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Tajikistan.

Accordingly, I am pleased to endorse the above project concept note with support from the Adaptation Fund. If approved, the project will be implemented by World Meteorological Organization and executed by the Committee of Environmental Protection under the Government of the Republic of Tajikistan and National Center for implementation of the Paris Agreement in partnership with the UN Convention to Combat Desertification (UNCCD), Global Water Partnership Organization (GWPO), Food and Agriculture Organization (FAO) and National Meteorological and Hydrological Services of Central Asia.

Sincerely,

Bahodur Sheralizoda
Chairman



"06" 04 2026

№ 01-04/6-259

Tashkent

The Adaptation Fund Board
1818 H Street NW
Washington DC 20433 USA

Subject: Endorsement for the Development of a Regional Project Concept Note on Integrated Drought Management for Central Asia

On behalf of the National Committee on Ecology and Climate Change of the Republic of Uzbekistan (National Committee), and in my capacity as the Designated Authority of Uzbekistan to the Adaptation Fund, I hereby express interest in the development of a regional project concept note with the aim to increase drought resilience in Central Asia.

I hereby confirm that the project concept note is in accordance with the Government's national priorities in implementing adaptation activities to reduce the adverse impacts of climate change in Uzbekistan.

In addition, we express the readiness of the National Committee's experts to contribute to the development of the project concept note on integrated drought management and the implementation of the resulting project at later stages.

With this, I am pleased to endorse the project concept note with appreciation of the support from the Adaptation Fund, which, if approved – will be implemented by the World Meteorological Organization (WMO).

Please be informed that Mr. Sherzod Khabibullayev, Director of Uzhydromet assigned to further contact (P: +99897 455-19-39; E-mail: uzhydro@gmail.com) on the project concept note development and to provide any needed input from the expert side. We look forward to your positive consideration and further support.

Sincerely yours,

Aziz Abdukhakimov

Advisor to the President of the Republic of Uzbekistan on Environmental Affairs –
Chairman of the National Committee on Ecology and Climate Change
Adaptation Fund Designated Authority



Revised PFG Submission Form¹
Project Formulation Grant (PFG)

Submission Date: 10 June 2026

Adaptation Fund Project ID: n/a

Country/ies: Kazakhstan, Tajikistan, Uzbekistan

Title of Project/Programme: Integrated Drought Management for Central Asia (IDCA)

Type of IE (NIE/RIE/MIE): MIE

Implementing Entity: World Meteorological Organization

Executing Entity: World Meteorological Organization

A. Project Preparation Timeframe

Start date of PFG	01/12/2026
Completion date of PFG	31/10/2027

B. Proposed Project Preparation Activities (\$)

#	List of Proposed Project Preparation Activities	Output of the PFG Activities	US\$ Amount	Budget note ²
1	Organize and hold regional stakeholder consultation workshop	- Specific activities to be included in the project, aimed at achieving desired outputs, identified and agreed - Activities, milestones, and indicators per output defined - Roles and responsibilities of each stakeholder in the project defined - Project resources allocation defined - Ownership of national and regional stakeholders of the project strengthened	33,000	Travel and DSA for approximately 30 participants, meeting venue, local transportation, stationary (Cost breakdown depending on location & time)

¹ As presented in AFB/PPRC.33/40 Annex 1.

² 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.

2	Gender and Environmental and Social risk analyses and formulation of Environmental and Social Management Plan and Gender Action Plan	- Gender and Environmental and Social risk analyses developed, and Environmental and Social Management Plan and Gender Action Plan formulated	17,910	Travel and DSA for approximately 30 participants, meeting venue, local transportation, stationary (Cost breakdown depending on location & time)
3	Identify and hire consultant(s) to support the development of the full project proposal	- Project proposal, environmental, social risk management plan, monitoring and evaluation plan developed - Project concept well-coordinated with country stakeholders and in line with AF rules and regulations	50,000	Daily rate of USD 500,00 Duration: 100 days
Total				
4	Implementing Entity Management Fee	- Project concept in line with latest standards and state of the art methodologies	10,090	10% of Total
Total Project Formulation Grant			111,000	

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

1. A regional stakeholder consultation workshop will be organized in one of the target countries, with participants from governments, civil society, academia and private sector. In the preparation of the pre-concept, key stakeholders had been engaged already – however since the project will be discussed and defined in detail, more relevant stakeholders will be included at this stage to ensure the project targets persisting and prioritized gaps and needs, to ensure country commitment, transparency and sustainability of activities.
2. The requested funding will support the undertaking of comprehensive gender, environmental, and social risk analyses to ensure that the proposed project is fully aligned with the requirements and safeguards of the Adaptation Fund. The resources will further enable the preparation of an Environmental and Social Management Plan (ESMP) and a Gender Action Plan (GAP), including related stakeholder consultations, risk assessment, mitigation measures, and the integration of

gender-responsive and socially inclusive approaches throughout project design and implementation.

3. External consultant(s) will be hired to support the drafting of the project concept and to coordinate with all national and regional stakeholders as well as the executing entities. This will ensure that all needs and expectations are well coordinated with country stakeholders and in line with Adaptation Fund rules and regulations. The proposed budget allows to hire a consultant for 120 days at a daily rate of USD 500. The consultant will be hired through a Special Service Agreement between the consultant and the executing entity.
4. Implementing Entity Management Fee: Different experts of the implementing and executing entities will be engaged in the process of preparing the project concept, providing expert input on different fields like Early Warning Systems (EWS), Monitoring etc. This amount is to compensate for the capacity of these experts within the executing entity.

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
Mr. Moyenda Chaponda	<i>Moyenda Chaponda</i>	10 June 2026	Ms. Petra Mutic	+41227308209	PMutic@wmo.int